EcoChem, Inc.

Environmental Science and Chemistry

DATA QUALITY EVALUATION

PORTLAND HARBOR

ANALYSIS OF ARCHIVED SEDIMENTS

Semivolatile Organic Compounds (SVOC) - Method SW8270C
Polycyclic Aromatic Hydrocarbons (PAH) - Method SW8270-SIM
Chlorinated Pesticides - Method SW8081A
Polychlorinated Biphenyls (PCB) – Method SW8082
Chlorinated Phenols - Method SW8151A
Organotins - Krone Method
Fuels – NWTPH-Gx and NWTPH-Dx Methods
Dioxin/Furan Compounds – Method E1613B
Polychlorinated Biphenyl (PCB) Congeners – Method E1668A
Metals - Methods SW6010/6020, SW7470/7471A, & SW7742
Total Organic Carbon – PSEP Method
Grain Size, Specific Gravity, and Percent Solids

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DATA QUALITY EVALUATION

BASIS OF DATA EVALUATION

The data were validated using guidance and quality control (QC) criteria documented in the analytical methods; *Guidance on Environmental Data Verification and Validation* (EPA 2002c); *Portland Harbor RI/FS, Round 2, Quality Assurance Project Plan* (QAPP) (Integral 2004); and *National Functional Guidelines for Organic and/or Inorganic Data Review* (USEPA 1994, 1999 & 2002). Additional guidance for polychlorinated biphenyl (PCB) congener data validation was from the *EPA Region 10 SOP for the Validation of Method 1668 Toxic, Dioxin-like PCB Data* (USEPA 1995) and for the dioxin/furan data, *EPA Region 10 SOP for the Validation of Polychlorinated Dibenzodioxin (PCDD) and Polychlorinated Dibenzofuran (PCDF) Data* (EPA 1996).

Data qualifier definitions, reason codes, and validation criteria are included as **Appendix A**. Data validation reports, which discuss individual findings for each quality control element [by sample delivery group (SDG)], are provided in **Appendix B**. Data validation worksheets and communication records are organized by SDG and will be kept on file at EcoChem.

PROCESS FOR DATA VALIDATION

All electronic data deliverable files (EDD) were verified by comparing 100% of the field sample results and 10% of the QC sample results to the hardcopy data package.

Ninety percent (90%) of the data received a Level III validation, which included evaluation (as appropriate for each method) of:

- Package completeness
- Sample chain-of-custody and sample preservation
- Analytical holding times
- Blank contamination
- Precision (replicate analyses)
- Accuracy (compound recovery)
- Chromatogram review (pesticide, PCB fractions)
- Detection limits
- Instrument performance (initial calibration, continuing calibration, tuning, sensitivity and degradation)

All other data packages received full (Level IV) data validation, which includes evaluation of compound identification and quantitation (transcription and calculation checks).

A dual-tier system of primary and secondary reviewers is utilized to ensure technical correctness and QC of the validation process; and all data validation is documented using standardized and controlled validation worksheets and spreadsheets. These worksheets are completed for each SDG, documenting all deficiencies, outliers and subsequent qualifiers.

After qualifiers are entered into the EcoChem database, a second party verifies 100% of the qualifier entry. Interpretive qualifiers are then applied to the field samples and qualified data is exported to the project database (Integral).

SUMMARY OF DATA VALIDATION: SEMIVOLATILE ORGANIC COMPOUNDS

A total of sixty-one (61) archived sediment samples were analyzed for semivolatile organic compounds (SVOC) for the Portland Harbor Phase 2 RI/FS. Columbia Analytical Services, Kelso, Washington completed the SVOC analyses.

The SVOC data for the archived sediment samples were generally acceptable. A total of 133 data points (4.5% of all archived sediment SVOC results) were of unacceptable quality and were rejected. Eighty (80) data points were estimated because control limits were exceeded in one or more laboratory QC samples or procedures. Qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were greater than 95% complete for the archived sediment SVOC analyses.

The table below summarizes the sediment results that were rejected during data validation and the associated QC item.

Number of Rejected Results	Reason for Rejection
131	Surrogate % Recovery
2	MS/MSD % Recovery

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Some samples were extracted several days outside the holding time criterion of one year; however, as all sediment samples were placed in archive and preserved by freezing at or below -20 °C, no action was taken. All extracts were analyzed within the holding time criterion.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial calibration analyses met all acceptance criteria.

The continuing calibration percent difference (%D) values were reviewed to evaluate instrument stability. When %D outliers were present, the potential bias was determined. If the %D outlier indicated a low bias, associated positive results and detection limits were estimated (J or UJ). If the %D outlier indicated a high bias, only associated positive results were estimated (J). A total of 41 detection limits were estimated (UJ). Overall, 1.4% of the archived sediment SVOC results were estimated based on calibration outliers.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5x) the concentration detected in the blank for most compounds and ten times (10x) for phthalates. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Various target analytes were detected in the method blanks. A total of 80 results (2.7% of all archived sediment SVOC results) were qualified as not detected (U) based on method blank contamination. The qualifiers were issued to bis(2-ethylhexyl)phthalate (31 results), di-n-butyl phthalate (21 results), phenol (22 results), and 4-chloro-3-methylphenol (6 results).

Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all samples. The surrogate recoveries reported by the laboratory typically met the criteria for acceptable performance; however, surrogate recovery outliers were present in several samples. If the outlier indicated a potential high bias, only the associated positive results were estimated (J). If the outlier indicated a potential low bias, positive results and reporting limits were estimated (J/UJ). If the recovery value was less than 10% indicating a significant low bias, positive results were estimated and reporting limits were rejected (J/R).

Nine (9) archived sediment SVOC results (0.3 percent of the results) were estimated (J or UJ) based on surrogate recovery outliers. A total of 131 archived sediment SVOC results (4.5% overall) were rejected (R).

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the proper frequency. Several of the recoveries reported by the laboratory for MS/MSD analyses did not meet the criteria for acceptable performance. Eight (8) archived sediment SVOC results (0.27% overall) were estimated (UJ) because the control limits for MS/MSD recovery were not met. Two (2) results (0.07% overall) were rejected (R). Results were rejected when the %R value was less than 10%, indicating an extremely low bias.

Laboratory Control Sample Recoveries

Laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses associated with the SVOC samples met the criteria for frequency of analysis. The recoveries of 2,4-dimethylphenol and 4,6-dinitro-2-methylphenol from one LCS/LCSD set were less than the lower control limits. These compounds were not detected in the associated samples; reporting limits for these compounds were estimated (UJ) due to the potential low bias. A total of 22 data points (0.75% of the SVOC results) were estimated.

Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. Several of the relative percent difference (RPD) values for the MS/MSD analyses did not meet the criteria for acceptable performance. For MS/MSD precision outliers, qualifiers were issued only if the affected compound was detected in the parent sample or was also qualified due to recovery outliers. One data point was estimated (UJ) during the quality assurance review because control limits for RPD values were not met.

Method Detection Limits and Method Reporting Limits

To try to meet the project analytical concentration goals (ACG), the laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size, percent moisture, and any dilution factor. These method reporting limits (MRLs) ranged from 1.5 µg/Kg to 150,000 µg/Kg for the non-detected results, with roughly 27% of the results greater than 10 µg/Kg. The ACG were not met for several of the SVOC compounds.

Field Quality Control Samples

No field QC samples were analyzed with the archived sediments. Field QC samples (field rinsates and field replicates) were previously analyzed when the sediments were originally collected.

SUMMARY OF DATA VALIDATION: POLYCYCLIC AROMATIC HYDROCARBONS

A total of sixty-three (63) archived sediment samples were analyzed for polycyclic aromatic hydrocarbon compounds (PAH) for the Portland Harbor Phase 2 RI/FS. Columbia Analytical Services, Kelso, Washington completed the PAH analyses.

The PAH data for the archived sediment samples were generally acceptable. No data were rejected for any reason. One data point was estimated, and forty data points (3.5% of all archived sediment PAH results) were qualified based on laboratory blank contamination. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the archived sediment PAH analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Some samples were extracted several days outside the holding time criterion of one year; however, as all sediment samples were placed in archive and preserved by freezing at or below -20 °C, no action was taken. All extracts were analyzed within the holding time criterion.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial calibrations met all acceptance criteria.

The continuing calibration percent difference (%D) values were reviewed to evaluate instrument stability. Several %D outliers were noted; however, the associated results were from dilution analyses that were not reported. No data were affected.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5X) the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Various target analytes were detected in the method blanks. A total of forty (40) results (3.5% of all archived sediment PAH results) were qualified as not detected (U) based on method blank contamination. The qualifiers were issued to 25 results for naphthalene, four results for dibenz(a,h)-anthracene, two results for benzo(k)fluoranthene, and one result each for anthracene, benz(a)-anthracene, benzo(a)pyrene, benzo(g,h,i)perylene, chrysene, fluoranthene, indeno(1,2,3-cd)pyrene, phenanthrene, and pyrene.

Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all samples. The surrogate recoveries reported by the laboratory typically met the criteria for acceptable performance; however, surrogate recovery outliers were present in several samples. Since only one surrogate outlier was present, or since the outliers were due to required dilution factors, the data were judged not affected and no action was taken.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the proper frequency. Several of the recoveries reported by the laboratory for MS/MSD analyses did not meet the criteria for acceptable performance. One PAH result was estimated (J) because the control limits for MS/MSD recovery were not met.

Laboratory Control Sample Recoveries

Laboratory control sample (LCS) analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory generally met the criteria for acceptable performance. Several outliers were noted; however, the outliers were due to an isolated extraction error and no data were affected.

Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. Several of the relative percent difference (RPD) values for the MS/MSD and LCS/LCSD analyses did not meet the acceptance criteria. However, the associated data were judged as not affected and no action was taken.

Method Detection Limits and Method Reporting Limits

The laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size and any dilution factor. These method reporting limits (MRLs) ranged from 0.21 to 2.8 μg/Kg for the non-detected results, with one acenaphthylene result at 23 μg/Kg.

Field Quality Control Samples

No field QC samples were analyzed with the archived sediments. Field QC samples (field rinsates and field replicates) were previously analyzed when the sediments were originally collected.

SUMMARY OF DATA VALIDATION: PESTICIDE COMPOUNDS

A total of eighty-eight (88) archived sediment samples were analyzed for pesticide compounds for the Portland Harbor Phase 2 RI/FS. Columbia Analytical Services, Kelso, Washington completed the pesticides analyses.

The pesticide data for the archived sediment samples were generally acceptable. No data were rejected for any reason. A total of 589 data points (21.6% of all archived sediment pesticide results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below. Note that many of the data points were estimated for more than one reason, so the numbers cited below add up to more than 589 data points.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the archived sediment pesticide analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Some samples were extracted several days outside the holding time criterion of one year; however, as all sediment samples were placed in archive and preserved by freezing at or below -20 °C, no action was taken. All extracts were analyzed within the holding time criterion.

Instrument Performance

Calibrations

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial calibrations met all acceptance criteria.

The continuing calibration (CCAL) percent difference (%D) values were used to evaluate instrument stability. The %D values for hexachlorobutadiene were outside the control limits in five of the CCALs, and the toxaphene %D values were outside of the control limits in two of the CCAL. When %D outliers were present, the potential bias was determined. If the %D outlier indicated a low bias, associated positive results and detection limits were estimated (J or UJ). If the %D outlier indicated a high bias, only associated positive results were estimated (J). A total of 16 detection limits were estimated (UJ). Overall, 0.57% of the archived sediment pesticide results were estimated based on calibration outliers.

Endrin/DDT Breakdown

Performance evaluation mixtures (PEM) were analyzed at the proper frequency to measure percent breakdown of 4,4'-DDT and endrin. All breakdown values were acceptable.

Method Blank Analyses

Method blanks were analyzed at the required frequency. Various target analytes were detected in several of the method blanks. However, the compounds were not detected in the associated samples, so no action was necessary.

Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all samples. The surrogate recoveries reported by the laboratory typically met the criteria for acceptable performance; however, surrogate recovery outliers were present in several samples. Since only one surrogate outlier was present, or since the outliers were due to required dilution factors, the data were judged not affected and no action was taken.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the proper frequency. Several of the recoveries reported by the laboratory for MS/MSD analyses did not meet the criteria for acceptable performance. Twenty-one (21) archived sediment pesticides results (0.77% overall) were estimated (J or UJ) because the control limits for MS/MSD recovery were not met.

Laboratory Control Sample Recoveries

Laboratory control sample (LCS) analyses met the criteria for frequency of analysis. Several of the recoveries reported by the laboratory for LCS analyses did not meet the criteria for acceptable performance. Since the LCS outliers indicated a potential low bias, associated positive results and reporting limits were affected. A total of 315 results were estimated (J or UJ) based on LCS recovery outliers. This represents 11.5% of all archived sediment pesticide results.

Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. Three relative percent difference (RPD) values were outside the acceptance limits in the MS/MSD analyses. The affected compounds were estimated (J or UJ) in the parent samples. The three (3) qualifiers represent 0.11% of the pesticide results.

Method Detection Limits and Method Reporting Limits

To try to meet the project analytical concentration goals (ACG), the laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size and any dilution factor. The reporting limits for non-detected results ranged from 0.039 µg/Kg to 250 µg/Kg (with toxaphene non-detects extending up to 5300 µg/Kg) for the non-detected results. The ACG were not met for several of the pesticides. No action was taken.

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40% the reported result was "P" flagged by the laboratory. As the elevated RPD value may indicate the presence of an interferent that may result in a high bias, the associated results were estimated (J). If the RPD value was greater than 60%, the result was qualified as a tentative identification (NJ). A total of 154 data points (5.6% of all archived sediment pesticide data points, and 30% of all positive results for pesticides) were estimated (J) and 124 data points (4.5% of all pesticide results, and 21.1% of all detected pesticide results) were qualified as tentative identifications (NJ). Overall, 54% of the detected pesticide results are affected by interference.

Field Quality Control Samples

No field QC samples were analyzed with the archived sediments. Field QC samples (field rinsates and field replicates) were previously analyzed when the sediments were originally collected.

SUMMARY OF DATA VALIDATION: POLYCHLORINATED BIPHENYL (PCB) COMPOUNDS

A total of ninety-eight (98) archived sediment samples were analyzed for PCB compounds for the Portland Harbor Phase 2 RI/FS. Columbia Analytical Services, Kelso, Washington completed the pesticides analyses.

The PCB data for the archived sediment samples were generally acceptable. No data were rejected for any reason. A total of 41 data points (4.9% of all archived sediment PCB results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the archived sediment PCB analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Some samples were extracted several days outside the holding time criterion of one year; however, as all sediment samples were placed in archive and preserved by freezing at or below -20 °C, no action was taken. All extracts were analyzed within the holding time criterion.

Instrument Performance

Calibrations

Initial and continuing calibrations were completed for all reported analytes at the proper frequency. All initial and continuing calibrations met all acceptance criteria.

Method Blank Analyses

Method blanks were analyzed at the appropriate frequency. No target analytes were detected in any method blank.

Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all samples. The surrogate recoveries reported by the laboratory typically met the criteria for acceptable performance; however, surrogate recovery outliers were present in one sample due to a required dilution factor. The data were judged not affected and no action was taken.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the proper frequency. Two of the recoveries reported by the laboratory for MS/MSD analyses did not meet the criteria for acceptable performance. As the recoveries indicated a potential high bias and as the affected compounds were not detected in the associated samples, no action was taken.

Laboratory Control Sample Recoveries

Laboratory control sample (LCS) analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. The relative percent difference (RPD) values reported by the laboratory met the criteria for acceptable performance.

Method Detection Limits and Method Reporting Limits

To meet the project analytical concentration goals (ACG), the laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size, percent moisture, and any dilution factor. These method reporting limits (MRLs) ranged from 1.4 µg/Kg to 18,000 µg/Kg for the non-detected results.

The analytical concentration goal (ACG) of 0.004 µg/Kg was not met, and the QAPP MRL of 4 µg/Kg was not met for 113 of the reported PCB non-detects. In some cases, the laboratory elevated the detection limit and flagged the result ("Ui") due to background interference. No action was taken.

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40% the reported result was "P" flagged by the laboratory. As the elevated RPD value may indicate the presence of an interferent that may result in a high bias, the associated results were estimated (J). If the RPD value was greater than 60%, the result was qualified as a tentative identification (NJ). A total of 36 data points (4.3% of all archived sediment PCB data points, and 30% of all positive results for PCB compounds) were estimated (J) and five (5) data points (0.6% of all PCB results, and 4.1% of all detected PCB results) were qualified as tentative identifications (NJ). Overall, 33.6% of the detected PCB results are affected by interference.

Field Quality Control Samples

No field QC samples were analyzed with the archived sediments. Field QC samples (field rinsates and field replicates) were previously analyzed when the sediments were originally collected.

SUMMARY OF DATA VALIDATION: CHLORINATED PHENOLS

A total of sixty (60) archived sediment samples were analyzed for chlorinated phenolic compounds for the Portland Harbor Phase 2 RI/FS. Columbia Analytical Services, Kelso, Washington completed the phenols analyses.

The phenols data for the archived sediment samples were generally acceptable. No data were rejected for any reason. A total of four (4) data points (1.3% of all archived sediment phenols results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the archived sediment phenols analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Some samples were extracted several days outside the holding time criterion of one year; however, as all sediment samples were placed in archive and preserved by freezing at or below -20 °C, no action was taken. All extracts were analyzed within the holding time criterion.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial and continuing calibration analyses met acceptance criteria.

Method Blank Analyses

Method blanks were analyzed at the appropriate frequency. No target analytes were detected in any method blank.

Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all field and QC samples. All surrogate recovery values met the criteria for acceptable performance.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the appropriate frequency. All MS/MSD recovery values were acceptable.

Laboratory Control Sample Recoveries

Laboratory control sample (LCS) analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Precision

MS/MSD and LCS/LCSD analyses were evaluated for laboratory precision. All of the relative percent difference (RPD) values were acceptable.

Method Detection Limits and Method Reporting Limits

The laboratory reported non-detects at the method detection limits (MDL), adjusted for sample size and any dilution factor. These method reporting limits (MRL) ranged from 0.31 to 68 μg/Kg for the non-detected results. These met the MRL values from the QAPP.

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40% the reported result was "P" flagged by the laboratory. As the elevated RPD value may indicate the presence of an interferent that may result in a high bias, the associated results were estimated (J). Four (4) data points (1.3% of all archived sediment phenols data points) were estimated (J).

Field Quality Control Samples

No field QC samples were analyzed with the archived sediments. Field QC samples (field rinsates and field replicates) were previously analyzed when the sediments were originally collected.

SUMMARY OF DATA VALIDATION: ORGANOTINS

Five (5) archived sediment samples were analyzed for organotin compounds for the Portland Harbor Phase 2 RI/FS. Columbia Analytical Services, Kelso, Washington completed the organotin analyses.

The organotin data for the archived sediment samples were generally acceptable. No data were rejected for any reason. One data point (5.0% of all archived sediment organotin results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the archived sediment organotin analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Some samples were extracted several days outside the holding time criterion of one year; however, as all sediment samples were placed in archive and preserved by freezing at or below -20 °C, no action was taken. All extracts were analyzed within the holding time criterion.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial and continuing calibration analyses met acceptance criteria.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5X) the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

A positive value for tri-n-butyltin was detected in one of the method blanks. The tri-n-butyltin result in one sample was qualified as not detected (U) at the reported concentration based on method blank contamination.

Accuracy

Surrogate Compound Recoveries

A surrogate compound was added to all field and QC samples. All surrogate recovery values met the criteria for acceptable performance.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses were performed at the appropriate frequency. All MS/MSD recovery values were acceptable.

Laboratory Control Sample Recoveries

Laboratory control sample (LCS) analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Precision

LCS/LCSD analyses were evaluated for laboratory precision. All of the relative percent difference (RPD) values were acceptable.

Method Detection Limits and Method Reporting Limits

The laboratory reported non-detects at the method detection limits (MDL), adjusted for sample size and any dilution factor. These method reporting limits (MRL) ranged from 0.084 to 0.17 μg/Kg for the non-detected results. These met the MRL values from the QAPP.

Compound Identification

The results from the two analytical columns were compared for agreement. In cases where the RPD value between the two columns was greater than 40% the reported result was "P" flagged by the laboratory. As the elevated RPD value may indicate the presence of an interferent that may result in a high bias, the associated results were estimated (J). One (1) data point (5.0% of all archived sediment organotin data points) was estimated (J).

Field Quality Control Samples

No field QC samples were analyzed with the archived sediments. Field QC samples (field rinsates and field replicates) were previously analyzed when the sediments were originally collected.

SUMMARY OF DATA VALIDATION: FUELS

A total of forty-four (44) archived sediment samples were analyzed for fuels [diesel range organics (DRO) and residual range organics (RRO)] for the Portland Harbor Phase 2 RI/FS. Columbia Analytical Services, Kelso, Washington completed the phenols analyses.

The fuels data for the archived sediment samples were generally acceptable. No data were rejected for any reason. A total of fifty-seven (57) data points (58.2% of all archived sediment fuels results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the archived sediment phenols analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Some samples were extracted several days outside the holding time criterion of one year; however, as all sediment samples were placed in archive and preserved by freezing at or below -20 °C, no action was taken. All extracts were analyzed within the holding time criterion.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial and continuing calibration analyses met acceptance criteria.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5X) the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks are used to evaluate all associated samples, including field blanks. Any remaining positive results in the field blanks are used to evaluate all associated samples. RRO was reported in two of the method blanks. Four (4) data points (4.1% of all subsurface sediment fuels results) were qualified as not detected (U) based on method blank contamination.

Accuracy

Surrogate Compound Recoveries

Surrogate compounds were added to all field and QC samples. All surrogate recovery values met the criteria for acceptable performance.

Matrix Spike Recoveries

Matrix spike/matrix spike duplicate (MS/MSD) analyses are not performed with fuels analyses.

Laboratory Control Sample Recoveries

Laboratory control sample (LCS) analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Precision

Laboratory duplicate analyses were evaluated for laboratory precision. All of the relative percent difference (RPD) values were acceptable.

Method Detection Limits and Method Reporting Limits

To meet the project method reporting limit (MRL) goal of 25 mg/Kg for the DRO and 100 mg/Kg for the RRO, the laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size, percent moisture, and any dilution factor. These MRLs ranged from 4.4 mg/Kg to 5.5 mg/Kg for the DRO and 4.1 mg/Kg to 4.6 mg/Kg for the RRO non-detected results.

Compound Identification

Several different flags were used by the laboratory to provide information about the reported results. These flags indicated that the pattern in the sample did not match the calibration standard. During validation, the data were estimated (J) to indicate that the reported result may not accurately reflect the concentration of fuels present in the sample. A total of 57 data points (58.2% of all subsurface sediment fuels data points) were estimated.

Field Quality Control Samples

No field QC samples were analyzed with the archived sediments. Field QC samples (field rinsates and field replicates) were previously analyzed when the sediments were originally collected.

SUMMARY OF DATA VALIDATION: DIOXIN/FURAN COMPOUNDS

Fifty-four (54) archived sediment samples were analyzed for dioxin and furan compounds for the Portland Harbor Phase 2 RI/FS. Columbia Analytical Services, Houston, Texas completed the analyses.

The dioxin/furan data for the archived sediment samples were generally acceptable. No data were rejected for any reason. A total of forty-eight (48) data points (3.4% of all archived sediment dioxin/furan results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the archived sediment dioxin/furan analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Some samples were extracted several days outside the holding time criterion of one year; however, as all sediment samples were placed in archive and preserved by freezing at or below -20 °C, no action was taken. All extracts were analyzed within the holding time criterion.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All initial calibration analyses met all acceptance criteria.

The continuing calibration percent difference (%D) values were reviewed to evaluate instrument stability. When %D outliers were present, the potential bias was determined. If the %D outlier indicated a low bias, associated positive results and detection limits were estimated (J or UJ). If the %D outlier indicated a high bias, only associated positive results were estimated (J). Two (2) results were estimated (J). Overall, 0.14% of the archived sediment dioxin/furan results were estimated based on calibration outliers.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5X) the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. Several target analytes were detected in the method blanks. A total of thirty (30) results (2.1% of all archived sediment dioxin/furan results) were qualified as not detected (U) based on method blank contamination. The qualifiers were issued to 19 results for OCDF, four results for 1234678-HpCDF, four results for OCDD, and three results for 1234678-HpCDD.

Accuracy

Labeled Compound Recoveries

Labeled compounds were added to all field and QC samples. The labeled compound recoveries reported by the laboratory typically met the criteria for acceptable performance; however, recovery outliers were present in several samples. All of the labeled compound percent recovery (%R) outliers indicated a potential high bias, positive results for associated target analytes were estimated (J). A total of 16 dioxin/furan results (0.98% of all archived sediment results) were estimated based on labeled compound recovery outliers.

Matrix Spike Recoveries

Matrix and duplicate matrix spike (MS/MSD) analyses were not performed. Accuracy was assessed using the labeled compound and ongoing precision and recovery (OPR) analyses.

Ongoing Precision and Recovery Sample Recoveries

OPR analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Precision

Laboratory duplicate analyses were evaluated for laboratory precision. Several of the relative percent difference (RPD) values for the duplicate analyses did not meet the criteria for acceptable performance. For laboratory duplicate precision outliers, qualifiers were issued only if the affected compound was detected in the parent sample. Twenty-two (22) data points (1.5% of all archived sediment dioxin/furan results) were estimated (J or UJ) during the quality assurance review because control limits for RPD values were not met.

Method Detection Limits and Method Reporting Limits

To try to meet the project analytical concentration goals (ACG), the laboratory reported non-detects at the method detection limits (MDLs), adjusted for sample size, percent moisture, and any dilution factor. These method reporting limits (MRLs) ranged from 0.005 pg/g to 0.414 pg/g for the nondetected results. However, the ACG were not met for most dioxin/furan congeners. No action was taken.

Compound Identification and Quantitation

Flags were used by the laboratory to provide information about the reported results. A "K" flag indicates that a peak was detected at the correct retention time for the target analyte; however, the ion abundance ratio criteria were not met. The reported result is an EMPC (estimated maximum possible concentration) value, which is essentially an elevated detection limit. Data flagged "K" by the laboratory were qualified as not detected (U) to make this relationship clear to the data user. Forty-five (45) data points (3.2% of all archived sediment dioxin/furan data points) were qualified as not detected because the ion abundance ratio criteria were not met.

A laboratory "E" flag indicates that the reported result is greater than the upper calibration range established by the initial calibration. If no dilution analysis was performed, the "E" flagged data were estimated (J). Ten (10) data points (0.70% of all archived sediment dioxin/furan data points) were estimated based on calibration range exceedance.

Field Quality Control Samples

No field QC samples were analyzed with the archived sediments. Field QC samples (field rinsates and field replicates) were previously analyzed when the sediments were originally collected.

SUMMARY OF DATA VALIDATION: PCB CONGENERS

Thirty (30) archived sediment samples were analyzed for polychlorinated biphenyl (PCB) congeners for the Portland Harbor Phase 2 RI/FS. Two equipment rinsate blanks were also analyzed. Samples were analyzed by Alta Analytical Laboratories, El Dorado Hills, California.

The PCB congener data for the archived sediment samples were generally acceptable. Four (4) data points (0.07% of all archived sediment PCB congener results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the archived sediment PCB congener analyses.

Holding Times and Sample Preservation

The initial sample preservation requirement (cooler temperature of 4°C ±2°) was not met for all samples. The majority of the sample coolers were received at the laboratory with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Some samples were extracted several days outside the holding time criterion of one year; however, as all sediment samples were placed in archive and preserved by freezing at or below -20 °C, no action was taken. All extracts were analyzed within the holding time criterion.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. All calibrations met all acceptance criteria.

All other instrument performance criteria were met by the laboratory.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5X) the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks are used to evaluate all associated samples, including field blanks. Any remaining positive results in the field blanks are used to evaluate all associated samples.

Method blanks were analyzed at the appropriate frequency. A total of fifty-eight (58) results (0.96% of all archived sediment PCB congener results) were qualified as not detected (U) based on method blank contamination. The congeners most frequently qualified due to method blank contamination were PCB169, PCB11, and PCB208.

Accuracy

Labeled Compound Recoveries

Labeled compounds were added to all field and QC samples. The recoveries reported by the laboratory met the criteria for acceptable performance.

Matrix Spike Recoveries

Matrix and duplicate matrix spike (MS/MSD) analyses were not performed. Accuracy was assessed using the labeled compound and ongoing precision and recovery (OPR) analyses.

Ongoing Precision and Recovery Sample Recoveries

OPR analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Precision

Laboratory duplicate analyses were evaluated for laboratory precision. Several of the relative percent difference (RPD) values for the duplicate analyses did not meet the criteria for acceptable performance. For laboratory duplicate precision outliers, qualifiers were issued only if the affected compound was detected in the parent sample. Four (4) data points (0.07% of all archived sediment PCB congener results) were estimated (J) during the quality assurance review because control limits for RPD values were not met.

Method Detection Limits and Method Reporting Limits

Analytical concentration goals (ACG) and method reporting limits (MRL) were not specified in the QAPP. For most samples the laboratory reported specific toxic PCB (PCB77, PCB81, PCB105, PCB106/118, PCB114, PCB123, PCB126, PCB156, PCB157, PCB167, PCB169, and PCB189) to sample specific reporting limits determined by the sample signal to noise ratio. All other PCB were reported to the method reporting limit.

Field Quality Control Samples

Field QC samples collected for the Phase 2 RI/FS included equipment rinsate blanks. The results for the field QC samples are discussed in the following sections.

Equipment Rinsate Blanks

All results in the equipment blanks were significantly less than the results in the sediment samples, even after the action levels were established. No action was necessary.

SUMMARY OF DATA VALIDATION: METALS

A total of forty-two (42) archived sediment samples were analyzed for total metals for the Portland Harbor Phase 2 RI/FS. Columbia Analytical Services, Kelso, Washington completed all analyses. The following analytical methods were used:

Parameter	Method
ICP Metals	SW6010B
ICP-MS Metals	SW6020
Mercury	SW7471A
Selenium	SW7740

The metals data for the archived sediment samples were generally acceptable. No data were rejected for any reason. A total of 108 data points (20.7% of all archived sediment metals results) were estimated because control limits were exceeded in one or more laboratory quality control (QC) samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the archived sediment metals analyses.

Holding Times and Sample Preservation

The samples were received at temperatures less than the recommended 4°C ±2°. These core samples were frozen upon collection and remained frozen until analysis. Holding times are extended for metals analysis of frozen samples. No action was taken based on low temperature readings or on extended holding times, with the following exception.

Mercury analyses were performed well beyond the QAPP specified 180 day holding time for frozen sediments. All results were positive and were estimated (J) to indicate a potential low bias. A total of fourteen (14) mercury results (2.7% of all archived sediment metals results) were estimated based on holding time outliers.

Instrument Performance

Initial and continuing calibrations were completed for all target analytes and met the criteria for frequency of analysis. The calibrations met all acceptance criteria.

Method Blank Analyses

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5X) the concentration detected in the blank. If a contaminant is detected in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U). No action is taken if the sample result is greater than the action level, or for non-detected results.

Method and instrument blanks were analyzed at the appropriate frequency. Various target analytes were detected in the method and/or instrument blanks. A summary of contaminant levels, associated samples, and action levels is provided in the data validation worksheets. A total of 67 metals results (12.8% of all archived sediment metals results) were qualified as not detected (U) based on blank contamination. The qualifiers issued were to cadmium (23 results), selenium (43 results), and silver (1 result).

Accuracy

The accuracy of the analytical results is evaluated in the following sections in terms of analytical bias (matrix spike [MS], laboratory control sample [LCS], contract required detection limit [CRDL] standard recovery values, interference check samples [ICS], and serial dilution percent difference [%D] values).

Matrix Spike Recoveries

MS analyses met the criteria for frequency of analysis. All of the recoveries reported by the laboratory for the antimony analyses did not meet the criteria for acceptable performance, with all outliers indicating a potential low bias. A total of 46 metals results (8.8% overall) were estimated (J) during the quality assurance review because the control limits for MS recovery were not met.

Laboratory Control Sample Recoveries

LCS analyses met the criteria for frequency of analysis. The recoveries reported by the laboratory met the criteria for acceptable performance.

Contract Required Detection Limit Standard Analyses

CRDL standards were analyzed at the beginning of each analytical sequence. For recoveries greater than the 130% upper control limit, the associated positive results less than two times the CRDL are estimated (J) to indicate a potential high bias. For recoveries less than the 70% lower control limit, positive results less than twice the CRDL and non-detects are estimated (J/UJ) to indicate a potential low bias. No data were qualified based on CRDL standard outliers.

Interference Check Samples

ICP interference check samples were analyzed at the beginning of each analytical sequence. All ICP interference check sample results were within the acceptance criteria.

Serial Dilution Analyses

Serial dilution analyses were performed at the proper frequency. Serial dilution %D values greater than 10% for sample results greater than 50 times the MDL may indicate the presence of matrix interference, resulting in potential bias. For serial dilution outliers, all associated sample results were qualified. A total of 48 metals results (9.2% of all archived sediment metals results) were estimated (J/UJ) based on serial dilution outliers.

Precision

Laboratory duplicate analyses were evaluated for laboratory precision. Two relative percent difference (RPD) values were outside the acceptance limits. Twenty-three (23) results (4.4% of all archived sediment metals results) were estimated (J) based on laboratory precision outliers.

Method Detection Limits and Method Reporting Limits

The laboratory reported non-detects at the MDLs, adjusted for sample size and any dilution factor. With the exception of two selenium results, all metals were detected in all samples.

Field Quality Control Samples

No field QC samples were analyzed with the archived sediments. Field QC samples (field rinsates and field replicates) were previously analyzed when the sediments were originally collected.

SUMMARY OF DATA VALIDATION: CONVENTIONALS

A total of 40 archived sediment samples were analyzed for some or all of the following parameters for the Portland Harbor Phase 2 RI/FS. Columbia Analytical Services, Kelso, Washington, completed all analyses. The following analytical methods were used:

Parameter	Method Number
Total Solids (TS)	EPA 160.3
Grain Size (GS)	PSEP 1986
Specific Gravity (SG)	ASTM D-854
Total Organic Carbon (TOC)	PSEP 1986

Overall, the conventional parameters data for the surface sediment samples were acceptable. No data were rejected for any reason. A total of 2,197 data points of 3,066 total data points (72%) were estimated because control limits were exceeded in one or more laboratory QC samples or procedures. These qualified data points may have a larger associated bias or may be less precise than unqualified data, but are usable for the intended purpose.

The laboratory data were evaluated in terms of completeness, holding times, instrument performance, bias, and precision. The results of the QC procedures used during sample analyses are discussed below.

Completeness of Data Set

Completeness is defined as the total number of usable results (results that were not rejected during data validation) divided by the total results reported by the laboratory. The results reported by the laboratory were 100% complete for the archived sediment conventional parameters analyses.

Holding Times and Sample Preservation

The QAPP-required holding time criterion for TOC for archived sediments is one year from date of sampling to date of analysis. The QAPP-required holding time criterion for grain size and specific gravity is 6 months from date of sampling to date of analysis.

Some TOC analyses were performed outside the holding time of one year, however as all sediment samples were stored in deep freeze and the TOC content should be stable, no qualifiers were applied. All of the grain size and specific gravity analyses were performed significantly beyond the 6-month holding time criterion. In addition, the sediment samples were frozen, which could potentially alter the results for these tests. Due to this, the results for grain size and specific gravity were estimated (J/UJ). A total of 2,197 data points (72% of all archived sediment conventional parameter results) were estimated based on holding time outliers.

Instrument Performance

Initial and continuing calibrations were completed for the TOC analyses and met the criteria for frequency of analysis. The initial calibrations met the linearity (percent relative standard deviation or correlation coefficient) control limits.

Method Blank Analyses

Two types of laboratory blanks were evaluated for possible contamination effects. These blanks were: initial and continuing calibration blanks (ICB and CCB) and method blanks (MB). The required frequency of one at the beginning and one every ten samples for calibration blank analysis was met. The laboratory analyzed one MB for every 20 samples digested or one per batch, for each digestion procedure, as required.

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times (5X) the concentration detected in the blank. TOC were detected at values greater than the MDL in several laboratory blanks. One field sample TOC result was less than the action level and was qualified as not detected (U).

Accuracy

The accuracy of the analytical results is evaluated in the following sections in terms of analytical bias (matrix spike [MS] and laboratory control sample [LCS] recoveries) and precision (sample or matrix spike duplicate [MSD] analyses).

Matrix Spike Recoveries

MS analyses were completed for the TOC analyses and met the criteria for frequency of analysis. All MS recovery values were acceptable.

Laboratory Control Sample Recoveries

An LCS was analyzed for the TOC analysis. All LCS recovery values were acceptable.

Precision

Laboratory duplicate and triplicate analyses (for grain size) were evaluated for laboratory precision. One of the percent relative standard deviation (%RSD) values for grain size did not meet the criteria for acceptable performance. A total of three grain size results were estimated (J) during the quality assurance review because control limits for relative percent difference (RPD) and RSD were not met.

Method Reporting Limits

The project method reporting limit goals were met for all conventional parameters.

Field Quality Control Samples

Field QC samples collected for the Phase 2 RI/FS included field replicate samples. The results for the field QC samples are discussed in the following sections.

Field Replicate Samples

All RPD values for field replicate analyses met the criteria for acceptable precision. The field replicates are discussed in more detail in the data validation reports.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Analysis of Archived Subsurface Sediments
Semivolatile Organic Compounds
Columbia Analytical Services—Kelso

This report documents the review of analytical data from the analyses of archived subsurface sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Services, Inc., Kelso, Washington analyzed the samples.

SDG	No. Samples	Validation Level
K0504569	12 Sediment	Full
K0504681	17 Sediment	Summary
K0504682	15 Sediment	Summary
K0504688	10 Sediment	Summary
K0504788	7 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found, with the exceptions noted below.

SDGs K0504569 & K0504682: The results for 1,4-dichlorobenzene were reported in the EDD as 1,4-difluorobenzene, with the CAS number for 1,4-difluorobenzene. The Form 1 results were correct. The EDD was corrected to match the hardcopy.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Technical Holding Times	2	Laboratory Control Samples (LCS/LCSD)
	GC/MS Instrument Performance Check	1	Field Replicates
	Initial Calibration (ICAL)		Internal Standards
2	Continuing Calibration (CCAL)		Target Analyte List
2	Method Blanks	1	Reporting Limits (MDL and MRL)
1	Field Blanks		Compound Identification (Full validation only)
2	Surrogate Compounds	1	Calculation Verification (Full validation only)
2	Matrix Spike/Matrix Spike Duplicates (MS/MSD)		

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Technical Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C, and that sediment samples should be archived frozen at -20°C ±4°. All samples were received within these limits, with the exceptions noted below.

The QAPP-required holding time criterion is one year from date of sampling to date of extraction. The QAPP-required holding time criterion for extracts is 40 days from extraction to analysis. Some samples were extracted several days outside the holding time of one year; however, as all sediment samples were stored in deep freeze, no action was taken. All extracts were analyzed within the holding time criterion.

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Continuing Calibration (CCAL)

All relative response factor (RRF) values were greater than the 0.05 minimum control limit. All percent difference (%D) values were within the ±25% control limit for all continuing calibrations (CCAL), with the exceptions noted below. If the %D outlier indicates a low bias, positive results and reporting limits in samples associated with %D outliers were estimated (J/UJ-5B). If the %D outlier indicates a potential high bias, only positive results were estimated (J-5B).

SDG K0504681:

- CCAL 10/18/05 at 7:24 on Instrument MS06: 2,4-Dinitrophenol with a low bias.
- CCAL 10/19/05 at 7:42 on Instrument MS06: n-Nitrosodimethylamine with a low bias.
- CCAL 11/10/05 at 11:07 on Instrument MS10: Bis(2-chloroisopropyl) ether with a low bias.

SDG K0504681:

- CCAL 10/19/05 at 7:42 on Instrument MS06: n-Nitrosodimethylamine with a low bias.
- CCAL 10/20/05 at 9:37 on Instrument MS06: n-Nitrosodimethylamine with a low bias.
- CCAL 11/10/05 at 11:07 on Instrument MS10: Bis(2-chloroisopropyl) ether with a low bias.

SDG K0504688:

- CCAL 10/30/05 at 10:05: 2,4-Dinitrophenol with a low bias.

Method Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. For the analytical batches noted below, one or more target analytes were reported in the method blank. Contaminant levels, associated samples, and action levels are provided in the data validation worksheets.

SDG K0504469: One sediment method blank was reported. No target analytes were detected.

SDG K0504681: Two sediment method blanks were reported with this SDG. Positive values for phenol, di-n-butyl phthalate, and bis(2-ethylhexyl) phthalate were reported in the 10/12/05 method blank. A positive value for bis(2-ethylhexyl) phthalate was reported in the 11/2/05 method blank. Fourteen phenol and di-n-butyl phthalate results, and nine bis(2-ethylhexyl)phthalate results were qualified as not detected (U-7) in the associated samples.

SDG K0504682: Two sediment method blanks were reported with this SDG. Positive values for phenol, di-n-butyl phthalate, and bis(2-ethylhexyl) phthalate were reported in the 10/12/05 method blank. Results less than the action levels were qualified as not detected (U-7) in the associated samples. Eight phenol, seven di-n-butyl phthalate, and 12 bis(2-ethylhexyl)phthalate results were qualified as not detected (U-7) in the associated samples.

A positive value for bis(2-ethylhexyl) phthalate was reported in the 11/2/05 method blank, this method blank was associated with the matrix spike/matrix spike duplicate (MS/MSD) only and no qualifiers were assigned.

SDG K0504688: One sediment method blank was reported. A positive result for bis(2-ethylhexyl) phthalate was reported. Results less than the action levels for bis(2-ethylhexyl)phthalate were qualified as not detected (U-7) in five of the associated samples.

SDG K0504788: One sediment method blank was reported. Positive results for bis(2-ethylhexyl) phthalate and 4-chloro-3-methylphenol were reported. Results less than the action levels for these analytes were qualified as not detected (U-7) in many of the associated samples.

Field Blanks

No samples identified as field blanks were submitted.

Surrogate Compounds

The percent recovery (%R) values for the surrogates were within the specified control limits of with the exceptions noted below. Qualifiers were only assigned when more than one %R value per fraction (acid or base-neutral) is outside the control limits. If the outlier indicated a potential high bias, only the associated positive results were estimated (J-13). If the outlier indicated a potential low bias, positive results and reporting limits were estimated (J/UJ-13).

SDG K0504569: The %R value for 2,4,6-tribromophenol at 114% was greater than the 113% upper control limit in Sample LW2-C293-D2. No action was taken as all other surrogate %R values were in control. The %R value for 2-fluorobiphenyl was less than 10% (at 9%) in Sample LW2-C444-E. No base-neutral analytes were detected in this sample. All base-neutral analyte reporting limits were rejected (R-13) in LW2-C444-E.

SDG K0504681: The %R values for 2-fluorobiphenyl were less than 10% in Samples LW2-C171-D (at 6%) and LW2-C155-D (at 8%). For analytes from the base-neutral fraction, positive values were estimated (J-13) and reporting limits were rejected (R-13) in these two samples.

SDG K 0504682: The %R value for 2-fluorobiphenyl was less than 10% in Sample LW2-C276-D (at 9%). For analytes from the base-neutral fraction, positive values were estimated (J-13) and reporting limits were rejected (R-13) in this sample. Surrogates were not recovered in Sample LW2-C302-D due to dilution (200X); no action was taken.

Matrix Spike/Matrix Spike Duplicates

MS/MSD analyses were performed at the required frequency. All MS/MSD recovery values were within the specified control limits, with the exceptions noted below. If the %R outlier was due to the presence of high levels of the target analyte present in the parent sample, no action was taken. If the concentration in the parent sample was less than four times the spike concentration, the results associated with the outlier were estimated (J-8) in the parent sample. If the recovery value was less than 10%, the reporting limits were rejected (R-8).

MS/MSD analyses were also evaluated for laboratory precision. Several of the relative percent difference (RPD) values for the MS/MSD analyses did not meet the criteria for acceptable performance, as noted below. For MS/MSD precision outliers, qualifiers were issued (J-9) only if the affected compound was detected in the parent sample or the compound was also qualified due to recovery outliers.

SDG K0504569: The MS/MSD analyses were performed using Sample LW2-C439-D. The %R values for aniline were less than the lower control limit. The RPD value exceeded the control limit of 40%. The reporting limit for aniline in the parent sample was estimated (UJ-8,9). The RPD values for eight analytes were greater than the control limits. No action was taken as these analytes were not detected in the parent sample, and the %R values were within control limits.

SDG K0504681: The MS/MSD analyses were performed using Sample LW2-C409-D. The %R values for 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, hexachloroethane, and hexachlorobutadiene were less than 10% in the MS. The %R values for these analytes were all acceptable in the MSD. No positive values for these analytes were reported in the parent sample and reporting limits were estimated (UJ-8).

The RPD values for bis(2-chloroethyl)ether, hexachloroethane, nitrobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, 1,2-dichlorobenzene, bis(2-chloroisopropyl)ether, 1,2,4-trichlorobenzene, hexachlorobutadiene, and hexachlorocyclopentadiene were greater than the 40% control limit. No action was taken as the analytes were not detected in the parent sample.

SDG K0504682: The MS/MSD analyses were performed using Sample LW2-C264-D. The %R values for aniline and benzoic acid were less than 10% in the MS. The %R values for these analytes were all acceptable in the MSD. These analytes were not detected in the parent sample; reporting limits were estimated (UJ-8).

The RPD values for n-nitrosodimethylamine, aniline, benzoic acid, 2,4-dintrophenol, and 2-methyl-4,6-dinitrophenol were greater than the control limit of 40%. No action was taken as the analytes were not detected in the parent sample and the %R values were in control.

SDG K0504688: The MS/MSD analyses were performed using Sample LW2-C011-F. The RPD values for benzoic acid and 2-methyl-4,6-dinitrophenol were greater than the control limit of 40%. No action was taken as the analytes were not detected in the parent sample and the %R values were in control.

SDG K0504788: The MS/MSD analyses were performed using Sample LW2-C060-A. The RPD values for benzoic acid, 2-methyl-4,6-dinitrophenol, 4-nitrophenol, and n-nitrosodimethylamine were greater than the control limit of 40%. No action was taken as the analytes were not detected in the parent sample and the %R values were in control. The %R values for aniline and benzoic acid were less than 10% for both the MS and MSD. Reporting limits for aniline and benzoic acid were rejected (R-8) in Sample LW2-C060-A. The %R value for 2-methyl-4,6-dinitrophenol MSD was less than 10%. No qualifiers were applied based upon professional judgment, as the MS, laboratory control sample (LCS), and laboratory control sample duplicate (LCSD) %R values were within control limits.

Laboratory Control Samples

All %R values were within the specified control limits and all RPD values were less than the control limit of 40% in the LCS/LCSD analyses, with the exceptions noted below.

SDG K0504569: LCS/LCSD analyses were performed with the samples in this SDG. The %R value for 2,4-dimethylphenol was less than 10% in the LCSD. As the %R values were acceptable (but low) in the LCS and MS.MSD, the reporting limits for 2,4-dimethylphenol were estimated (UJ-10) rather than rejected in the associated samples. The RPD value for benzoic acid was greater than the control limit. No qualifiers were assigned as benzoic acid was not detected in the associated samples.

SDG K0506481: Two sets of LCS/LCSD were reported with this SDG. The RPD value (at 51%) for aniline was greater than the control limit of 40% in the LCS/LCSD prepared 10/12/05. No positive values for this analyte were reported in the associated samples and reporting limits were judged to be unaffected; no qualifiers were assigned.

The %R value for bis(2-ethylhexyl) phthalate in the LCS was greater than the upper control limit in the LCS prepared 11/2/05. In addition, the RPD value for bis(2-ethylhexyl) phthalate was also greater than the control limit in this LCS/LCSD set. This analyte was previously qualified as not detected (U) due to method blank contamination in the associated sample and no further action was taken.

SDG K0506482: Two sets of LCS/LCSD were reported with this SDG. The RPD value for benzoic acid was greater than the control limit of 40% in the LCS/LCSD prepared 10/12/05. No positive values for this analyte were reported in the associated samples and reporting limits were judged to be unaffected; no qualifiers were assigned.

The %R value for bis(2-ethylhexyl) phthalate in the LCS was greater than the upper control limit in the LCS prepared 11/2/05. In addition, the RPD value for bis(2-ethylhexyl) phthalate was also greater than the control limit in this LCS/LCSD set. This LCS/LCSD set is only associated with the MS/MSD and no action was taken.

SDG K0504688: The %R values for 2-methyl-4,6-dinitrophenol were less than the lower control limit in the LCS and LCSD. No positive values for this analyte were reported and reporting limits were estimated (UJ-10).

Field Replicates

No samples identified as field replicates were submitted.

Reporting Limits (Method Detection Limit and Method Reporting Limit)

The analytical concentration goals (ACG) were not met for many compounds, however the specified method reporting limits (MRL) were met for all analytes unless sample dilutions were required. A complete list of samples and dilution factors is documented in the validation worksheets.

SDG K0504569: Six of 12 samples were diluted because of high levels of target analytes and background interferences. The reporting limits of all compounds in these samples were raised accordingly.

SDG K0504681: Samples LW2-C270-D (5X) and LW2-C273-D (50X) were analyzed at dilution due to background interferences. Reporting limits were elevated accordingly.

SDG K0504682: Samples LW2-C302-D (200X), LW2-C135-D (10X), LW2-C182-D (10X), LW2-C185-D (2X), LW2-C252-D (2X), and LW2-C015-E (2X) were analyzed at dilution due to background interferences. Reporting limits were elevated accordingly. The reporting limit for di-n-octyl phthalate in Sample LW2-C019-D1 was elevated due to background interference.

SDG K0504688: Sample LW2-C455-F was analyzed at dilution (5X) due to background interferences. Reporting limits were elevated accordingly.

Compound Identification

It was noted by the laboratory that 3-methylphenol could not be separated from 4-methylphenol. Also, 1,2-diphenylhydrazine was reported as azobenzene for all results.

Calculation Verification

SDG K0504569: Calculation verifications were performed on this data set. No calculation errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD %R values, with the exceptions noted above. Precision was also acceptable as demonstrated by the LCS/LCSD and MS/MSD RPD values, again with the exceptions noted above.

Data were qualified as estimated because of surrogate, LCS/LCSD, MS/MSD accuracy outliers and continuing calibration %D outliers. Data were also qualified as not detected based on contamination in the associated laboratory blanks. Data were rejected due to surrogate and MS/MSD recoveries less than 10%.

Data that have been rejected should not be used for any purpose. All other data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Analysis of Archived Subsurface Sediments
Polycyclic Aromatic Hydrocarbons (PAH)
Columbia Analytical Services—Kelso

This report documents the review of analytical data from the analyses of archived subsurface sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Services, Inc., Kelso, Washington, analyzed the samples.

SDG	No. Samples	Validation Level
K0504569	9 Sediment	Full
K0504681	15 Sediment	Summary
K0504682	18 Sediment	Summary
K0504688	11 Sediment	Summary
K0504788	10 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Technical Holding Times	1	Laboratory Control Samples (LCS/LCSD)
	GC/MS Instrument Performance Check	1	Field Replicates
	Initial Calibration (ICAL)		Internal Standards
1	Continuing Calibration (CCAL)		Target Analyte List
2	Blanks (Method and Field)	1	Reporting Limits (MDL and MRL)
1	Surrogate Compounds		Compound Identification (Full validation only)
2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)	1	Calculation Verification (Full validation only)

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Technical Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C, and that sediment samples should be archived frozen at -20°C ±4°. All samples were received within these limits, with the exceptions noted below.

The QAPP-required holding time criterion is one year from date of sampling to date of extraction. The QAPP-required holding time criterion for extracts is 40 days from extraction to analysis. Some samples were extracted several days outside the holding time of one year, however as all sediment samples were stored in deep freeze, no action was taken. All extracts were analyzed within the holding time criterion.

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Continuing Calibration (CCAL)

All relative response factor (RRF) values were greater than the 0.05 minimum control limit. All percent difference (%D) values were within the ±25% control limit for all continuing calibrations (CCAL), with the exceptions noted below. If the %D outlier indicates a low bias, positive results and reporting limits in samples associated with %D outliers were estimated (J/UJ). If the %D outlier indicates a potential high bias, only positive results were estimated (J).

SDGs K0504681 and K0504682: CCAL 10/25/05 10:34: low bias for indeno(1,2,3-c,d)pyrene and dibenz(a,h)anthracene. These compounds were not reported from the dilution analyses associated with this CCAL; no data were qualified.

Method Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. For the analytical batches noted below, one or more target analytes were reported in the method blank. A summary of contaminant levels, associated samples, and action levels is documented in the data validation worksheets.

SDG K0504569: One sediment method blank was reported with this SDG. Positive results for ten of 18 analytes were reported in the method blank.

The following analytes were qualified as not detected (U-7) in Sample LW2-C439-D: naphthalene, phenanthrene, and chrysene. Naphthalene was also qualified in Samples LW2-C384-F and LW2-C436-E. All other associated results were not detected or greater than the action level.

SDG K0504681: One sediment method blank was reported with this SDG. A positive value for naphthalene was reported in this method blank. Positive values for naphthalene were qualified as not detected (U-7) in Samples LW2-C155-D, LW2-C171-D, LW2-C342-E, LW2-C346-E, LW2-C347-E, LW2-C426-A, LW2-C405-E, LW2-C409-D, and LW2-C245-F.

SDG K0504682: Two sediment method blanks were reported with this SDG. A positive value for naphthalene was reported in the 10/12/05 method blank. Positive values for naphthalene were qualified as not detected (U-7) in Samples LW2-C019-D1, LW2-C152-E, and LW2-C156-F. Positive values for most analytes were reported in the 11/02/05 method blank, however this method blank was only associate with the MS/MSD and no action was taken.

SDG K0504688: One sediment method blank was reported with this SDG. Positive results for 10 of 18 analytes were reported in this method blank. Positive values for one or more compounds were qualified as not detected (U-7) in Samples LW2-C202-D, LW2-C011-F1, LW2-C401-F, LW2-C434-A, and LW2-C455-F.

SDG K0504788: One sediment method blank was reported with this SDG. Positive results for naphthalene and fluoranthene were reported in this method blank. Positive values for naphthalene were qualified as not detected (U-7) in seven samples.

All SDGs: No samples identified as field blanks were submitted with these SDGs.

Surrogate Compounds

The percent recovery (%R) values for the surrogates were within the specified control limits, with the exceptions noted below. Qualifiers were only assigned when more than one %R value is outside the control limits. If the outlier indicated a potential high bias, only the associated positive results were estimated (J-13). If the outlier indicated a potential low bias, positive results and reporting limits were estimated (J/UJ-13). For %R values less than 10%, associated reporting limits were rejected (R). A complete list of all %R outliers is documented in the validation worksheets.

SDG K0504569: The %R value for terphenyl-d14 exceeded the upper control limit in Sample LW2-C293-D2. No action was taken as all other %R values were within control limits.

SDG K0504682: The surrogates fluorene-d10, fluoranthene-d10, and terphenyl-d14 were not recovered in Sample LW2-C302-D due to dilution (500X). No action was taken.

Matrix Spike/Matrix Spike Duplicates

MS/MSD analyses were performed at the required frequency. All MS/MSD recovery values were within the specified control limits, with the exceptions noted below. If the %R outlier was due to the presence of high levels of the target analyte present in the parent sample, no action was taken. If the concentration in the parent sample was less than four times the spike concentration, the results associated with the outlier were estimated (J-8) in the parent sample.

MS/MSD analyses were also evaluated for laboratory precision. Several of the relative percent difference (RPD) values for the MS/MSD analyses did not meet the criteria for acceptable performance, as noted below. For MS/MSD precision outliers, qualifiers were issued only if the affected compound was detected in the parent sample.

SDG K0504681: One MS/MSD (parent Sample LW2-C409-D) set was associated with this SDG. The RPD value for naphthalene was greater than the control limit of 40%, at 59%. The naphthalene value in the parent sample was already qualified as not detected (U) due to method blank contamination and no further action was necessary.

SDG K0504682: One MS/MSD (parent Sample LW2-C264-D) set was associated with this SDG. The %R values for phenanthrene were less than the lower control limit in the MS/MSD and the value for phenanthrene was estimated (J-8) in the parent sample. The %R values for fluoranthene and pyrene were less than the lower control limits in the MSD. As the %R values in the MS and the associated laboratory control sample/laboratory control sample duplicate (LCS/LCSD) were acceptable, no qualifiers were assigned.

Laboratory Control Samples

All %R values were within the specified control limits and all RPD values were less than the control limit of 40% in the LCS/LCSD analyses, with the exceptions noted below.

SDG K0504788: The %R value for acenaphthylene, 2-methylnaphthalene, and naphthalene was less than lower control limits of 10% in the LCSD. The RPD values for acenaphthene, acenaphthylene, 2-methylnaphthalene, and naphthalene were greater than the control limit. No qualifiers were assigned as the outliers were due to an extraction problem and the MS, MSD, and LCS %R values were all within control limits.

Field Replicates

No samples identified as field replicates were submitted.

Reporting Limits (Method Detection Limits and Method Reporting Limit)

SDG K0504569: Samples LW2-C521-D and LW2-C293-A2 were diluted because of high levels of target analytes and background interferences. The reporting limits of all compounds in these samples were raised accordingly. No data were qualified based on reporting limits.

SDG K0504681: Sample LW2-C273-D was analyzed at dilution (50X) and reporting limits were elevated accordingly.

SDG K0504682: Samples LW2-C302-D (500X), LW2-C135-D (2X), LW2-C182-D (10X), and LW2-C258-D (10X) were analyzed at dilution and reporting limits were elevated accordingly.

SDG K0504688: The reporting limit for acenaphthylene was elevated in Sample LW2-C377-D due to background interference.

SDG K0504788: The reporting limits for some analytes were elevated due to background interference or necessary dilution of the samples.

Calculation Verification

SDG K0504569: Calculation verifications were performed on this SDG. No calculation errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, LCS/LCSD, and MS/MSD %R values. Precision was also acceptable as demonstrated by the field replicate, LCS/LCSD, and MS/MSD RPD values.

Data were estimated due to MS/MSD recovery outliers. Data were also qualified as not detected based on contamination in the associated laboratory blanks.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Analysis of Archived Subsurface Sediments
Chlorophenols
Columbia Analytical Services—Kelso

This report documents the review of analytical data from the analyses of archived subsurface sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Services, Inc., Kelso, Washington, analyzed the samples.

SDG	No. Samples	Validation Level
K0504569	12 Sediment	Full
K0504681	16 Sediment	Summary
K0504682	15 Sediment	Summary
K0504688	10 Sediment	Summary
K0504788	7 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Technical Holding Times and Sample Receipt		Matrix Spikes/Matrix Spike Duplicates
	Instrument Performance Check		Laboratory Control Samples
	Initial Calibration (ICAL)	1	Field Replicates
	Continuing Calibration (CCAL)	1	Reporting Limits (MDL and MRL)
1	Blanks (Method and Field)	2	Compound Identification
	Surrogate Compounds	1	Calculation Verification (full validation only)

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Technical Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C, and that sediment samples should be archived frozen at -20°C±4°C. All samples were received within these limits, with the exceptions noted below.

The QAPP-required holding time criterion is one year from date of sampling to date of extraction. The QAPP-required holding time criterion for extracts is 40 days from extraction to analysis. Some samples were extracted a few days outside the holding time of one year, however as all sediment samples were stored in deep freeze, no action was taken. All extracts were analyzed within the holding time criterion.

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Blanks (Method and Field)

No target analytes were detected in any method blank. No field blanks were submitted.

Field Replicates

No samples identified as field replicates were submitted.

Reporting Limits (Method Detection Limit and Method Reporting Limit)

SDG K0504681: The reporting limits for 2,4,5-trichlorophenol in Sample LW2-C270-D, 2,4,6-trichlorophenol in Sample LW2-C373-D, and 2,3,4,5-tetrachlorophenol in Samples LW2-C461-D, LW2-C425-F1, LW2-C448-D, LW2-C270-D, and LW2-C454-H were elevated due to background interference. Samples LW2-C355-E (10X), LW2-C462-D (5X), LW2-C273-D (5X), LW2-C364-D (5X), and LW2-C448-D (5X) were analyzed at dilution and reporting limits were elevated accordingly.

SDG K0504682: The reporting limits for 2,4,6-trichlorophenol in samples LW2-C276-D and LW2-C327-D, 2,4,5-trichlorophenol sample LW2-C302-D, 2,3,4,5-tetrachlorophenol in samples LW2-C267-D, LW2-C302-D, LW2-C185-D, LW2-C252-D, LW2-C264-D, LW2-C022-D, and LW2-C327-D, pentachlorophenol in sample LW2-C019-D1 were elevated due to background interference. Samples LW2-C302-E (10X), LW2-C135-D (10X), LW2-C182-D (10X), and LW2-C252-D (5X) were analyzed at dilution and reporting limits were elevated accordingly.

SDG K0504688: The reporting limits for 2,3,5,6-tetrachlorophenol in sample LW2-C111-A2 and 2,3,4,5-tetrachlorophenol in sample LW2-C455-F were elevated due to background interference.

SDG K0504788: The reporting limits for some analytes were elevated due to background interference.

Compound Identification

It was noted by the laboratory that 2,3,5,6-tetrachlorophenol could not be separated from

2,3,4,6-tetrachlorophenol.

The results from the two analytical columns were compared for agreement. In cases where the percent difference (%D) value between the two columns was greater than 40%, the laboratory flagged the results with a "P". These results were estimated (J-3).

SDG K0504681: The pentachlorophenol %D values were greater than 40% in Samples LW2-C461-D, LW2-C373-D, and LW2-C454-H.

SDG K0504682: The pentachlorophenol %D value was greater than 40% in Sample LW2-C022-D.

Calculation Verification

SDG K0504569: Calculation verification was performed on this SDG. No calculation errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample/laboratory control sample duplicate (LCS/LCSD), and matrix spike/matrix spike duplicate (MS/MSD) percent recovery values. Precision was acceptable as demonstrated by the relative percent difference values for the LCS/LCSD and MS/MSD analyses.

Data were estimated based on differences between the results from the two analytical columns.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Analysis of Archived Subsurface Sediments
Pesticides
Columbia Analytical Services—Kelso

This report documents the review of analytical data from the analyses of archived subsurface sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Columbia Analytical Services, Inc., Kelso, Washington.

SDG	No. Samples	Validation Level
K0504569	20 Sediment	Full
K0504681	20 Sediment	Summary
K0504682	20 Sediment	Summary
K0504688	8 Sediment	Summary
K0504788	20 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Technical Holding Times and Sample Receipt	2	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Instrument Performance Check	2	Laboratory Control Samples (LCS)
	Initial Calibration (ICAL)	1	Field Duplicates
2	Continuing Calibration (CCAL)	1	Reporting Limits (MDL and MRL)
1	Blanks (Method and Field)	2	Compound Identification
1	Surrogate Compounds	1	Calculation Verification (full validation only)

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Technical Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C, and that sediment samples should be archived frozen at -20°C ±4°. All samples were received within these limits, with the exceptions noted below.

The QAPP-required holding time criterion is one year from date of sampling to date of extraction. The QAPP-required holding time criterion for extracts is 40 days from extraction to analysis. Some samples were extracted outside the holding time of one year, however as all sediment samples were stored in deep freeze, no action was taken. All extracts were analyzed within the holding time criterion.

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Continuing Calibration (CCAL)

Continuing calibrations were analyzed at the proper frequency. The percent difference (%D) values were calculated correctly, and were within the control limit of ±25%, with the following exceptions.

SDG K0504569: The %D value for hexachlorobutadiene at 44% in the continuing calibration analyzed 10/31/05 at 18:02 greater than the control limit of ±25%. Hexachlorobutadiene was not detected in the associated samples. The reporting limits were judged to be unaffected since the outlier indicated a potential high bias.

SDG K0504681: The hexachlorobutadiene %D values were outside the ±25% control limit in four CCALs, indicating a potential low bias. Positive values and/or reporting limits for hexachlorobutadiene were estimated (J/UJ-5B) in the associated samples.

SDG K0504682: The toxaphene %D value (at 27%) was outside the control limit in the continuing calibration analyzed 11/3/05 at 07:12. No action was taken as only QC analyses were associated.

SDG K0504788: The toxaphene %D value (at 27%) was outside the control limit in the continuing calibration analyzed 11/3/05 at 07:12. The reporting limits were estimated (UJ-5B) in the associated samples.

Blanks (Method and Field)

In order to assess the impact of blank contamination on the reported sample results, action levels at five times the blank concentrations were established. If the concentrations in the associated field samples were less than the action levels, the results were qualified as not detected (U-7). If the result was also less than the reporting limit, then the result was elevated to the reporting limit.

SDG K0504688: Two method blanks were submitted with this SDG. Gamma-BHC was detected in the method blank from 10/19/05. There were no positive results for this analyte in any associated sample; no further action was necessary.

SDG K0504788: Three method blanks were submitted with this SDG. Delta-BHC was detected in the method blank from 10/19/05 and 4,4'-DDT was detected in the method blank from 12/5/05. There were no positive results for these analytes in any associated sample; no further action was necessary.

All SDGs: No samples identified as field blanks were submitted.

Surrogates

The percent recovery (%R) values for the surrogates tetrachloro-meta-xylene (TCMX) and decachlorobiphenyl (DCBP) were within the control limits of 60% to 140% with the exceptions noted below. Qualifiers were only assigned when more than one %R value is outside the control limits. If the outlier indicated a potential high bias, only the associated positive results were estimated (J-13). If the outlier indicated a potential low bias, positive results and reporting limits were estimated (J/UJ-13). For %R values less than 10%, associated reporting limits were rejected (R). A complete list of all %R outliers is present in the validation worksheets.

SDG K0504569: DCBP was not recovered in Sample LW2-C521-C due to required extract dilution. No action was taken. The DCBP %R value (at 168%) was greater than the upper control limit of 140% in Sample LW2-C420-D MS. No action was taken since this was a QC sample.

SDG K0504681: The %R value for TCMX (35%) in Sample LW2-C300-A was less than the lower control limit. No action was taken for a single outlier.

SDG K0504682: DCBP was not recovered and the %R value for TCMX (207%) was greater than the upper control limit in Sample LW2-C299-C due to required extract dilution. The %R values for DCBP (5938%) and TCMX (691%) were greater than the upper control limit in Sample LW2-C302-C due to required extract dilution. As these outliers were due to dilution no qualifiers were assigned. The %R values for TCMX were less than the lower control limit in a batch QC matrix spike/matrix spike duplicate (MS/MSD) set. Qualifiers are not assigned to QC samples, no action was taken.

Matrix Spikes/Matrix Spike Duplicates

MS/MSD analyses were performed at an acceptable frequency. All %R values were within the 60% to 40% control limits, with the exceptions noted below. All relative percent difference (RPD) values were less than the 20% upper acceptance limit, with the exceptions noted below. When outliers were present, only the associated compounds in the parent sample were qualified. All outliers are documented in the validation worksheets. Four MS/MSD analyses were submitted with each extraction batch. A complete list of all %R outliers is present in the validation worksheets.

SDG K0504569: Eight MS/MSD analyses were performed with this SDG. For LW2-C436-C MS/MSD, the %R values for hexachlorobenzene and endrin ketone were less than the lower control limit. The MSD %R value and the RPD value for 4,4'-DDD were greater than the upper control limits. The positive result for endrin ketone and the reporting limit for hexachlorobenzene were estimated (J/UJ-8), and the reported result for 4,4'-DDD was estimated (J-8,9) in Sample LW2-C436-C.

For LW2-C420-D MS/MSD, the MS %R and RPD values for trans-nonachlor were outside of control limits. The %R values for hexachloroethane were less than the lower control limit. The reporting limit for trans-nonachlor was estimated (UJ-8,9) and the reporting limit for hexachloroethane was estimated (UJ-8) in the parent sample.

For LW2-C421-A MS/MSD, the %R and RPD values for toxaphene were outside of control limits. The reporting limit for toxaphene was estimated (UJ-8,9) in the parent sample.

For LW2-C290-B MS/MSD, the %R values for hexachlorobenzene were less than the lower control limit. The reporting limit for hexachlorobenzene was estimated (UJ-8) in the parent sample. The %R values for 4,4′-DDD (MS low) and 4,4′-DDT (not recovered) were outside of control limits. No action was taken for 4,4′-DDD as the MSD %R value was within control limits. No action was taken for 4,4′-DDT as the native concentration of these pesticides was greater than four times the spiking amount.

For LW2-C521-D MS/MSD, the %R values for mirex were greater than the upper control limit and the %R values for hexachloroethane were less than the lower control limit. The reported result for mirex was estimated (J-8) and the reporting limit for hexachloroethane was estimated (UJ-8) in the parent sample.

SDG K0504682: This SDG included two extraction batches. For batch KWG0517782 the MS/MSD analyses were performed using three batch QC samples and Sample LW2-C276-D. The %R values for hexachlorobenzene, 2,4′-DDD MSD, and 2,4′-DDT %R values were less than the lower control limits in one of the batch QC MS/MSD sets, no action was taken as the parent sample was not from this SDG. The toxaphene %R value was greater than the upper control limit in the MSD performed using Sample LW2-C276-D, no action was taken since the MS and LCS %R values were within control limits.

For batch KWG0517942 the MS/MSD analyses were performed using a batch QC sample and Samples LW2-C272-E, LW2-C173-D, and LW2-C264-D. For the MS/MSD performed on Sample LW2-C172-E, the %R values for hexachlorobenzene and 2,4′-DDT %R values were less than the lower control limits, results and reporting limits were estimated (J/UJ-8) in the parent sample.

SDG K0504688: This SDG included two extraction batches. For batch KWG0517942 two sets of MS/MSD analyses were submitted, using batch QC samples. The %R values for hexachlorobenzene and 4,4′-DDT were less than the lower control limits in one of these MS/MSD sets. No action was taken as the parent sample was not from this SDG.

For batch KWG0518009 the MS/MSD analyses were performed using a batch QC sample and Samples LW2-C066-F, LW2-C401-F, and LW2-C431-F. The %R values for hexachlorobenzene were less than the lower control limit in the MS/MSD performed on Sample LW2-C431-F. This analyte was not detected and the reporting limit was estimated (UJ-8) in Sample LW2-C431-F. The %R value for hexachlorobutadiene was less than the lower control limit in the MSD performed on Sample LW2-C401-F, no qualifiers were applied as the MS and LCS %R values were within limits.

SDG K0504788: This SDG included two extraction batches. For batch KWG0518009 the MS/MSD analyses were performed using three batch QC samples and Sample LW2-C158-D. The MS/MSD %R values for hexachlorobenzene and hexachloroethane, and the hexachlorobutadiene MSD %R values were less than the lower control limits in two of the batch QC MS/MSD sets, no action was taken as the parent sample was not from this SDG.

For batch KWG0520776 the MS/MSD analyses were performed using Samples LW2-C061-E, LW2-C138-D, LW2-C139-D, and LW2-C196-B. For the MS/MSD performed on Sample LW2-C061-E, the %R values for hexachlorobenzene were less than the lower control limits, results and reporting limits were estimated (J/UJ-8) in the parent sample. For the MS/MSD performed using Sample LW2-C196-B, the %R values for cis-nonachlor, hexachloroethane, hexachlorobutadiene, oxychlordane, and trans-nonachlor were less than the lower control limits. Positive results and reporting limits were estimated (J/UJ-8) in the parent sample.

Laboratory Control Samples

All %R values were within the control limits of 70% to 130% and all RPD values were less than the control limit of 20% in the laboratory control samples/laboratory control sample duplicate (LCS/LCSD) analyses, with the exceptions noted below. A complete list of all %R outliers is present in the validation worksheets.

SDG K0504681 and K0504682: Two LCS samples were submitted with this SDG. The %R values for gamma-chlordane, hexachloroethane, and 4,4′-DDD were less than the lower control limits in the LCS associated with batch KWG0517782-3. Positive results and reporting limits were estimated (J/UJ-10) in the associated samples.

SDG K0504688: Two LCS samples were submitted with this SDG. The %R values for 12 analytes were less than the lower control limits in the LCS associated with batch KWG0518009-3. Positive results and/or reporting limits for these analytes were estimated (J/UJ-10) in the associated samples.

SDG K0504788: Two LCS and one LCS/LCSD samples were submitted with this SDG. The %R values for 12 analytes were less than the lower control limits in the LCS associated with batch KWG0518009. The %R values for 16 analytes were less than the lower control limits in the LCS associated with batch KWG0520776. Positive results and/or reporting limits for these analytes were estimated (J/UJ-10) in the associated samples.

Field Replicates

No samples identified as field replicates were submitted.

Reporting Limits (MDL and MRL)

Most of the analytical concentration goals (ACG) were not met, however the specified method reporting limits (MRL) were met for all analytes, with the exceptions noted below.

SDG K0504569: Seven samples were analyzed at dilution. Reporting limits were elevated accordingly and no action was taken.

SDG K0504681: Reporting limits were elevated in several samples due to dilution and/or non-target background components; and no action was taken.

SDG K0504682: Twelve samples were analyzed at dilution. Reporting limits were elevated accordingly and no action was taken.

SDGs K0504688 & K0504788: Reporting limits were elevated in several samples due to dilution and/or non-target background components; and no action was taken.

Compound Identification

The results from the two analytical columns were compared for agreement. The laboratory applies a "P" qualifier to values when the percent difference (%D) between the two analytical columns is greater than 40%. In cases where the %D value between the two columns was between 25% and

60%, the result was estimated (J-3). Where the %D value between the two columns was greater than 60%, the result was tentatively identified (NJ-3). Refer to the data validation worksheets for a detailed list of these outliers.

SDG K0504569: Most samples had between one and seven confirmation criteria outliers. Nineteen (19) positive results were estimated (J-3), and 30 results were tentatively identified (NJ-3).

SDG K0504681: Most samples had between one and eight confirmation criteria outliers. Forty-seven (47) positive results were estimated (J-3), and 23 results were tentatively identified (NJ-3).

SDG K0504682: Most samples had between one and nine confirmation criteria outliers. Thirty-three (33) positive results were estimated (J-3), and 32 results were tentatively identified (NJ-3).

SDG K0504688: Five samples had between one and three confirmation criteria outliers. Six (6) positive results were estimated (J-3), and one result was tentatively identified (NJ-3).

SDG K0504788: Most samples had between two and nine confirmation criteria outliers. Forty-nine (49) positive results were estimated (J-3), and 39 results were tentatively identified (NJ-3).

Calculation Verification

SDG K0504569: Calculation verifications were performed on this SDG. No calculation errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory performed an appropriate analytical method. Accuracy was acceptable, as demonstrated by the surrogate, MS/MSD, and LCS/LCSD percent recovery values, with the above exceptions. Precision was acceptable as demonstrated by the RPD values for the MS/MSD and LCS/LCSD analyses, with the above noted exceptions.

Data were qualified based on confirmation criteria, LCS %R, MS/MSD %R and RPD outliers. Data were tentatively identified based on confirmation criteria outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Analysis of Archived Subsurface Sediments
PCB - Aroclors
Columbia Analytical Services—Kelso

This report documents the review of analytical data from the analyses of archived subsurface sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Columbia Analytical Services, Inc., Kelso, Washington.

SDG	No. Samples	Validation Level
K0504569	20 Sediment	Full
K0504681	25 Sediment	Summary
K0504682	20 Sediment	Summary
K0504688	15 Sediment	Summary
K0504788	18 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found, with the exceptions noted below.

SDG K0504688: The value for Aroclor 1260 in Sample LW2-C147-D and the reporting limit for Aroclor 1254 in Sample LW2-C356-D were incorrect in the EDD. These values were corrected by the validator.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Technical Holding Times and Sample Receipt		Laboratory Control Samples
	Initial Calibration (ICAL)	1	Field Replicates
	Continuing Calibration (CCAL)	2	Compound Identification
	Blanks (Method and Field)	1	Reporting Limits (MDL and MRL)
1	Surrogate Compounds	1	Calculation Verification (full validation only)
1	Matrix Spikes/Matrix Spike Duplicates		

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Technical Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C, and that sediment samples should be archived frozen at -20°C ±4°. All samples were received within these limits, with the exceptions noted below.

The QAPP-required holding time criterion is one year from date of sampling to date of extraction. The QAPP-required holding time criterion for extracts is 40 days from extraction to analysis. Some samples were extracted outside the holding time of one year, however as all sediment samples were stored in deep freeze and PCB compounds are known to be extremely stable, no action was taken. All extracts were analyzed within the holding time criterion.

The laboratory received the majority of the sample coolers with temperatures outside the advisory control limits of 2° to 6°C, ranging from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Surrogates

The percent recovery (%R) value for the surrogate decachlorobiphenyl (DCBP) was within the control limits of 60% to 140% with the exceptions noted below. If the outlier indicated a potential high bias, only the associated positive results were estimated (J-13). If the outlier indicated a potential low bias, positive results and reporting limits were estimated (J/UJ-13). For %R values less than 10%, associated reporting limits were rejected (R). A complete list of all %R outliers is present in the validation worksheets.

SDG K0504688: The %R value for DCBP was greater than the upper control limit in Sample LW2-C356-D due to required extract dilution (1000X). No action was taken.

Matrix Spikes/Matrix Spike Duplicates

SDG K0504681 and K0504682: Two matrix spike/matrix spike duplicate (MS/MSD) sets were submitted with these SDG, using parent samples LW2-C448-D and LW2-C458-D2. For the LW2-C448-D MS/MSD set, the %R values for Aroclor 1016 exceeded the upper control limit, at 248% and 218%, respectively. Aroclor 1016 was not detected in the parent sample and reporting limits were judged to be unaffected. No qualifiers were assigned.

Field Replicates

No samples were identified as field replicates.

Compound Identification

The results from the two analytical columns were compared for agreement. The laboratory usually applies a "P" qualifier to values when the percent difference (%D) between the two analytical columns is greater than 25%. In cases where the %D value between the two columns was between 25% and 60% the result was estimated (J-3), where the %D value between the two columns was greater than 60% the result was tentatively identified (NJ-3). Refer to the data validation worksheets for a detailed list of these outliers.

SDG K0504569: The result for Aroclor 1242 was estimated (J-3) in Sample LW2-C440-D.

SDG K0504681: One result for Aroclor 1242, nine results for Aroclor 1254, and four results for Aroclor 1260 were estimated (J-3). One result each for Aroclor 1248 and Aroclor 1254 were qualified as tentatively identified (NJ-3).

SDG K0504682: Three results for Aroclor 1248 were estimated (J-3) and four results for Aroclor 1254 were estimated (J-3).

SDG K0504688: One result for Aroclor 1242, one result for Aroclor 1254, and three results for Aroclor 1260 were estimated (J-3). One result for Aroclor 1254 was qualified as tentatively identified (NJ-3).

SDG K0504788: One result for Aroclor 1248, seven results for Aroclor 1254, and one result for Aroclor 1260 were estimated (J-3). Two results for Aroclor 1254 was qualified as tentatively identified (NJ-3).

Reporting Limits (MDL and MRL)

The analytical concentration goal (ACG) of 0.004 µg/Kg was not met, however the QAPP MRL of 4 µg/Kg was met in most samples. In some cases, the laboratory elevated the detection limit to the MRL and flagged the result ("Ui") due to background interference.

SDGs K0504681, K0504682, K0504688, & K0504788: Reporting limits were elevated for several analytes in several samples due to dilution and/or non-target background components; and no action was taken.

Calculation Verification (full validation only)

SDG K0504569: Calculation and transcription verifications were performed on this SDG. No errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample/laboratory control sample duplicate (LCS/LCSD), and MS/MSD %R values, with the exceptions noted above. Precision was acceptable as demonstrated by the relative percent difference values for the LCS/LCSD and MS/MSD analyses.

Data were estimated or qualified as tentatively identified based on poor agreement between the two analytical columns.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Analysis of Archived Subsurface Sediments
PCB Congeners by EPA Method 1668
Alta Analytical

This report documents the review of analytical data from the analyses of subsurface sediment samples and the associated laboratory quality control (QC) samples. Alta Analytical Laboratory, Inc., El Dorado Hills, California, analyzed the samples.

SDG	No. Samples	Validation Level
26817	11 Archived Cores	Full
26818	19 Archived Cores	Summary
27024	2 Rinsate Blanks	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found, with the exceptions noted below.

SDG 26817: The values for PCB77, PCB81, and total hexachlorobiphenyls reported for the method blank were incorrect in the EDD. The values were corrected by the data reviewer. No further action was necessary.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Technical Holding Times and Sample Receipt
1	GC/MS Tuning
	Initial Calibration (ICAL)
1	Calibration Verification (CVER)
	Isomer Specificity
2	Laboratory Blanks
1	Field Blanks
	Labeled Compound Recovery
1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Ongoing Precision and Recovery (OPR)
2	Laboratory Duplicate
1	Field Replicates
	Compound Identification
1	Reporting Limits
1	Calculation Verification (full validation only)

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Technical Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C for rinsate blanks, and that sediment samples should be deep frozen at -20°C ±4°. All samples were received within these limits, with the exceptions noted below.

The QAPP-required holding time criterion is one year from date of sampling to date of extraction. The QAPP-required holding time criterion for extracts is 40 days from extraction to analysis. Some samples were extracted outside the holding time of one year, however as all sediment samples were stored in deep freeze and PCB congeners are known to be extremely stable no action was taken. All extracts were analyzed within the holding time criterion.

SDG 26817: Two of the three sample coolers were received by the laboratory at 0.6° and 0.0°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Samples LW2-C184-B and LW2-C455-B were received by the laboratory with cracked jars. The laboratory contacted Integral Consulting and was instructed to continue with the analysis.

SDG 26818: Both of the two sample coolers were received by the laboratory at temperatures less than the control limits at 0.6° and 0.0°C. These temperature outliers were judged to have no impact on the data and no action was taken.

Samples LW2-C093-B, LW2-C263-C, LW2-C277-C, LW2-C302-B, LW2-C342-B, LW2-C342-C, LW2-C453-B, and LW2-C494-C were received by the laboratory with cracked or broken jars. The laboratory contacted Integral Consulting and was instructed to continue with the analysis.

SDG 27024: The sample cooler was received by the laboratory at 0.7°C. This temperature outlier was judged to have no impact on the data and no action was taken.

GC/MS Tuning

SDG 26817: Due to a filament failure no GC/MS tune was analyzed at the end of the 12-hour shift opened by the GC/MS tune analyzed 11/1/05 at 15:22. As all other tunes have been acceptable and all labeled compound recoveries in the associated samples were acceptable, no action was taken.

Calibration Verification (CVER)

SDG 26817: Due to a filament failure no closing CVER was analyzed for the 12-hour shift opened by the GC/MS tune analyzed 11/1/05 at 15:25 (see above). As all CVER in this SDG were acceptable and all labeled compound recoveries in the associated samples were acceptable, no action was taken.

Laboratory Blanks

In order to assess the impact of laboratory blank contamination on the reported sample results, action levels at five times the blank concentrations are established. If the concentrations in the associated field samples are less than the action levels, the results are qualified as not detected (U-7). If the result is also less than the reporting limit, the result is elevated to the reporting limit.

SDG 26817: Positive values for PCB47, PCB77, PCB81, and PCB169 were reported in the laboratory blank. The reported results for PCB47, PCB77, and PCB81 in Sample LW2-C377-E and for PCB169 in all samples were qualified U-7.

SDG 26818: Three method blanks were submitted with this SDG. The method blank for QC Batch 7371 had positive values reported for 30 PCB congeners. The method blank for QC Batch 7405 had positive values reported for PCB47 and PCB169. The method blank for QC Batch 7425 had a positive value reported for PCB169.

The PCB11 results in eight samples, the PCB208 results in six samples, the PCB169 results in two samples, the PCB207 results in two samples, and the results for PCB47, PCB201, PCB202, PCB206, and PCB209 in one sample each were qualified as not detected (U-7).

SDG 27024: Positive values for several PCB were reported in the method blank. Positive values for one or more of PCB1, PCB18, PCB52/69, PCB105, PCB106/118, and PCB169 were qualified as not detected (U-7) in the samples.

Field Blanks

SDG 27024: Both samples in this SDG were field blanks. Positive values for 16 PCB were reported in Sample LW2-C901 and positive values for 3 PCB were reported in Sample LW2-C920. All results in the equipment blanks were significantly less than the results in the sediment samples, even after the action levels were established. No further action was necessary.

Matrix Spikes/Matrix Spike Duplicates

SDG 26817, 26818, & 27024: Matrix spikes/matrix spike duplicates (MS/MSD) were not analyzed. Accuracy was evaluated using the labeled compound and on-going precision recovery (OPR) values. Precision was evaluated using the laboratory duplicate analysis.

Laboratory Duplicate

Laboratory duplicate analyses were performed with each batch. All laboratory duplicate precision results were within the acceptance criteria [relative percent difference (RPD) values less than 50% for analytes with values greater than five times the reporting limit (RL), or an absolute difference of two times the RL for analytes with values less than five times the RL], with the exceptions noted below.

SDG 26817: Duplicate analysis was performed on Sample LW2-C111-B2. The reported values for PCB23 and PCB86 did not meet the acceptance criteria above. Values for these analytes were estimated (J-9) in both the parent sample and the duplicate.

SDG 26818: Duplicate analysis was performed on Sample LW2-C327-D. Laboratory precision was acceptable.

SDG 27024: No laboratory duplicate analysis was submitted with this SDG.

Field Replicates

SDG 26817, 26818, & 27024: No samples identified as field replicates were submitted.

Reporting Limits (Method Detection Limit and Method Reporting Limit)

Analytical concentration goals (ACG) and method reporting limits (MRL) were not specified in the QAPP. For most samples the laboratory reported specific toxic PCB (PCB77, PCB81, PCB105, PCB106/118, PCB114, PCB123, PCB126, PCB156, PCB157, PCB167, PCB169, and PCB189) to sample specific reporting limits determined by the sample signal to noise ratio. All other PCB were reported to the method reporting limit.

SDG 26817: Samples LW2-C184-B (10X), LW2-C366-C1 (10X), LW2-C377-E (10X), LW2-C401-E (10X), LW2-C431-B (10X), LW2-C455-B (10X), and LW2-C455-C (10X) were analyzed at dilution and reporting limits were elevated accordingly. Reporting limits were further elevated for Sample LW2-C455-B due to limited sample volume.

SDG 26818: Samples LW2-C093-B, LW2-C203-C, LW2-C207-B, LW2-C263-C, and LW2-C302-B were analyzed at dilution (10X) and reporting limits were elevated accordingly.

Calculation Verification

SDG 26817: Calculation verification was performed on this SDG. No errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the labeled compound and OPR percent recovery values. Precision was acceptable as demonstrated by the laboratory duplicate RPD values, with the exceptions noted above.

Data were estimated based on laboratory precision outliers. Data were qualified as not detected due to contamination in the associated laboratory blank.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Analysis of Archived Subsurface Sediments
Dioxin/Furan Compounds by EPA 1613 ver. B
Columbia Analytical Services—Houston

This report documents the review of analytical data from the analyses of archived subsurface sediment samples and the associated laboratory quality control (QC) samples. Columbia Analytical Services, Houston, Texas analyzed the samples.

SDG	No. Samples	Validation Level
K0504794	14 Sediment	Full
K0504717	20 Sediment	Summary
K0504719	20 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables, with the exceptions noted below. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

Several of the closing calibration standards from the DB-5 column were not included in the data package. A closing calibration is not required by EPA Method 1613 version B. As all of the calibration standards that were submitted were acceptable, no action was taken.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). Several discrepancies were noted between the EDD and the hardcopy data, as noted below. The EDD were corrected by the validator. After correction, the EDD matched the hardcopy data.

SDG K0504717: The laboratory "K" flags were removed from the 2,3,7,8-TCDF results in Samples LW2-C291-B, LW2-C382-B, and LW2-C291-A. A laboratory "K" flag was added to the 1,2,3,7,8-PeCDF result in Sample LW2-C342-B. The laboratory "J" flag was added to the 2,3,7,8-TCDF results in Samples LW2-C342-C, LW2-C290-A, and LW2-C290-B. For Sample LW2-C302-C, the laboratory "U,J" flag was changed to "J" and the result changed to 'detected' for 2,3,7,8-TCDD and 1,2,3,7,8,9-HxCDD. The 2,3,7,8-TCDF result was corrected to 18.921 (from 39.8) pg/g to reflect the value from the dilution analysis on the DB-225 column. The "K" flag was also removed.

SDG K0504719: The laboratory "K" flag was removed from the 2,3,7,8-TCDF result in Sample LW2-C196-A. The laboratory "J" flag was removed from the 2,3,7,8-TCDF result in Sample LW2-C067-A. For Sample LW2-C011-C2, the 1,2,3,6,7,8-HxCDF result was corrected to 0.384 (from 0.98) pg/g, and the Total HxCDF result was corrected to 3.952 (from 4.004) pg/g.

SDG K0504794: The laboratory "K" flags were removed from the 1,2,3,7,8,9-HxCDF results in Sample LW2-C136-B and LW2-C136-BDup, and from the 2,3,4,6,7,8-HxCDF result in LW2-C136-BDup. Laboratory "K" flags were added to the 2,3,7,8-TCDD result in Sample LW2-C366-C and the 2,3,4,6,7,8-HxCDF result in Sample LW2-C136-B. The 1,2,3,4,6,7,8-HpCDD, OCDD, and

OCDF results in Sample LW2-C455-B and the 2,3,7,8-TCDF result in Sample LW2-C348-D were corrected as discussed in the **Compound Identification/Reported Results** section.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times and Sample Receipt	1	Ongoing Precision and Recovery (OPR)
	Initial Calibration (ICAL)	1	Field Duplicates
2	Continuing Calibration (CCAL)	1	Laboratory Duplicates
2	Laboratory Blanks	2	Compound Identification/Reported Results
	Field Blanks	1	Reporting Limits (MDL and MRL)
2	Labeled Compounds	1	Calculation Verification (full validation only)
1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Receipt

The validation guidance documents state that the cooler temperatures should be within an advisory temperature range of 2° to 6°C, and that sediment samples should be archived frozen at -20°C ±4°. All samples were received within these limits, with the exceptions noted below.

The QAPP-required holding time criterion is one year from date of sampling to date of extraction. The QAPP-required holding time criterion for extracts is 40 days from extraction to analysis. Some samples were extracted outside the holding time of one year, however as all sediment samples were stored in deep freeze and dioxin/furan compounds are known to be extremely stable, no action was taken. All extracts were analyzed within the holding time criterion.

SDG K0504717: The sample cooler was received by the laboratory with a temperature at 1.0°C.

SDG K0504719: The sample cooler was received by the laboratory with a temperature at 1.0°C.

SDG K0504794: The sample cooler was received by the laboratory with a temperature at 1.0°C.

The temperature outliers were judged to have no impact on the data and no action was taken.

Continuing Calibration

SDG K0504719: The concentration of 1,2,3,7,8-PeCDF (at 61 ng/ml) was greater than the 60 ng/ml upper control limit in the continuing calibration analyzed 10/25/05 at 13:17. Due to the potential high bias, positive results for 1,2,3,7,8-PeCDF were estimated (J-5B) in the associated samples, LW2-C011-C2 and LW2-C067-B.

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

SDG K0504717: Positive values for one or more analytes were reported in both of the method blanks. Action levels of five times the blank concentrations were established and the sample results were compared to the action levels. Samples with values less than the action level were qualified as not detected (U-7) at the reported concentration.

SDG K0504719: Positive values for one or more analytes were reported in two of the three method blanks. Action levels of five times the blank concentrations were established and the sample results were compared to the action levels. Samples with values less than the action level were qualified as not detected (U-7) at the reported concentration.

SDG K0504794: Positive values for four analytes were reported in the method blank. Action levels of five times the blank concentrations were established and the sample results were compared to the action levels. One or more of these analytes were present in four samples at concentrations less than the action level and were qualified as not detected (U-7) at the reported concentration.

Labeled Compounds

SDG K0504717: The percent recovery (%R) values for several labeled compounds were greater than the upper control limits in Samples LW2-C302-B and LW2-C302-C. Positive values for the associated native analytes were estimated (J-13).

SDG K0504719: The %R value for $^{13}C_{12}$-1,2,3,4,7,8-HxCDD was greater than the upper control limit in Sample LW2-C314-D. Positive values for the associated native analytes were estimated (J-13).

Matrix Spikes/Matrix Spike Duplicates

No matrix spike/matrix spike duplicate (MS/MSD) sets were performed with these SDGs. Accuracy and precision were assessed using labeled compound recoveries, ongoing precision and recovery (OPR) samples, and laboratory duplicate samples.

Field Duplicates

No samples identified as field duplicates were submitted with these SDG.

Laboratory Duplicates

Duplicate sample pairs are listed below. The following acceptance criteria were applied: the relative percent difference (RPD) control limit is 50% for results greater than five times the reporting limit. For results less than five times the reporting limit, the absolute difference between the sample and duplicate must be less than two times the reporting limit.

SDG K0504717: Duplicate analysis was performed on Sample LW2-C291-B. The precision for 1,2,3,4,6,7,8-HpCDD, OCDD, 1,2,3,4,6,7,8-HpCDF, and OCDF did not meet the acceptance criteria and values for these analytes were estimated (J-9) in the sample and duplicate.

SDG K0504719: Duplicate analysis was performed on Sample LW2-C144-B. The precision for 2,3,7,8-TCDF and 1,2,3,4,7,8-HxCDF did not meet the acceptance criteria. The values for these analytes were estimated (J-9) in the sample and duplicate.

SDG K0504794: Duplicate analysis was performed on Sample LW2-C136-B. The precision for 1,2,3,4,6,7,8-HpCDD, OCDD, 2,3,7,8-TCDF, 1,2,3,4,6,7,8-HpCDF, and OCDF did not meet the acceptance criteria. The values for these analytes were estimated (J-9) in the sample and duplicate.

Compound Identification

The laboratory assigned K-flags to numerous values when a peak was detected but did not meet quantitation criteria, therefore the reported values cannot be considered as positive identification for these analytes. These results were considered potential false positives or "estimated maximum possible concentrations" and were qualified as not detected (U-21) at the reported values. Laboratory blank values with K flags were treated as not detected results.

All results for 2,3,7,8-TCDF were confirmed on a DB-225 column as required by the method. Although the 2,3,7,8-TCDF results from both columns were reported in the raw data, only the results from the DB-225 column were reported in the EDD. No action was necessary.

The laboratory used an “E” flag to indicate when reported results (usually OCDD or OCDF) were at concentrations greater than the linear range of the instrument calibration. These samples were usually not reanalyzed at dilutions. Since results greater than the linear range could have a potential low bias, all “E” flagged results were estimated (J-20), as noted below.

SDG K054717: Values for OCDD that were greater than the linear range of the calibration were reported in Samples LW2-C277-C and LW2-C291-C. These values were estimated (J-20).

SDG K054719: The value for OCDD in Sample LW2-C453-B was greater than the linear range of the calibration and this value was estimated (J-20).

SDG K054794: Values for OCDD and/or OCDF that were greater than the linear range of the calibration were reported in Samples LW2-C136-C, LW2-C111-D2, LW2-C348-B, LW2-C430-C, LW2-C431-B and LW2-C455-C. These values were estimated (J-20).

The 1,2,3,4,6,7,8-HpCDD, OCDD, and OCDF results in Sample LW2-C455-B and the 2,3,7,8-TCDF result in Sample LW2-C348-D were “E” flagged by the laboratory. Dilutions were analyzed for these samples, and the results from the dilutions were used to calculate the TEF (toxic equivalency factors) reported on the Form 3 in the package. However, the “E” flagged results were reported on the sample result summary form and in the EDD. The laboratory confirmed that the results from the dilutions should be reported. The results in the EDD were changed by the reviewer.

Reporting Limits (MRL and MDL)

SDG K054717: Sample LW2-C302-C was re-extracted with a smaller sample size due to high levels of target analytes. Reporting limits were elevated accordingly.

Calculation Verification

SDG K0504794: A full validation (Level IV) was performed this SDG. No calculation errors were identified.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the labeled compound and OPR %R values. Precision was acceptable as demonstrated by the RPD values for the OPR and OPR duplicate and the laboratory duplicate analyses, with the exceptions noted above.

Data were estimated due to calibration outliers, labeled compound recovery outliers, and laboratory duplicate precision outliers. Data were qualified as not detected due to ion ratio criteria outliers and contamination in the associated blanks.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Analysis of Archived Subsurface Sediments
Organotins
Columbia Analytical Laboratories—Kelso

This report documents the review of analytical data from the analyses of archived subsurface sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Columbia Analytical Services, Inc., Kelso, Washington.

SDG	No. Samples	Validation Level
K0504830	5 Sediment	Full

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Technical Holding Times and Sample Receipt	1	Matrix Spikes/Matrix Spike Duplicates (MS/MSD)
	Instrument Performance Check		Laboratory Control Samples (LCS)
	Initial Calibration (ICAL)	1	Replicate Analyses
	Continuing Calibration (CCAL)	1	Reporting Limits (MDL and MRL)
2	Laboratory Blanks	2	Compound Identification
1	Field Blanks	1	Calculation Verification (full validation only)
	Surrogate Compounds		

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Technical Holding Times and Sample Receipt

The QAPP-required holding time criterion is one year from date of sampling to date of extraction. The QAPP-required holding time criterion for extracts is 40 days from extraction to analysis. Some samples were extracted several days outside the holding time of one year; however, as all sediment samples were stored in deep freeze, no action was taken. All extracts were analyzed within the holding time criterion.

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

SDG K0504830: One sediment method blank was reported with this SDG. A positive result for tri-n-butyltin was reported in the method blank extracted on 10/18/05. The tri-n-butyltin result in Sample LW2-C457-D was less than the action level and was qualified as not detected (U-7).

Field Blanks

SDG K0504830: No samples identified as field blanks were submitted.

Matrix Spikes/Matrix Spike Duplicates

SDG K0504830: One set of matrix spike/matrix spike duplicate (MS/MSD) analyses were performed on Sample LW2-C420-A. In this sample set, the percent recovery (%R) values for tri-n-butyltin were greater than the upper control limit of 140%. No action was taken for tri-n-butyltin as the native concentration of this compound was greater than four times the spiking amount.

Reporting Limits (MDL and MRL)

The specified method reporting limits (MRL) were met for all analytes, with the exceptions noted below.

SDG K0504830: Samples LW2-C409-B and LW2-C420-B were analyzed at dilutions. Reporting limits were elevated accordingly and no action was taken.

Compound Identification

The laboratory applies a "P" qualifier to values when the relative percent difference (RPD) value between the two analytical columns is greater than 40%. When the RPD value was greater than 40% but less than 60% the reported value was estimated (J-3). If the RPD value was greater than 60%, the reported value was qualified as estimated and tentatively identified (NJ-3).

SDG K0504830: The RPD value for tetra-n-butyltin exceeded 60% in Sample LW2-C420-A. The reported value was qualified (NJ-3) as estimated and tentatively identified.

Calculation Verification (full validation only)

SDG K2504830: Calculation verifications were performed on this SDG. No calculation or transcription errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate, laboratory control sample, and MS/MSD %R values, with the exceptions noted above. Precision was also acceptable as demonstrated by the RPD values for the MS/MSD.

One data point was estimated based on a column confirmation outlier. One data point was qualified as not detected based on contamination in the associated laboratory blank.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Analysis of Archived Subsurface Sediments
Diesel and Residual Range Hydrocarbons (NWTPH-Dx)
Columbia Analytical Services—Kelso

This report documents the review of analytical data from the analyses of archived subsurface sediment samples and the associated laboratory and field quality control (QC) samples. Samples were analyzed by Columbia Analytical Services, Inc., Kelso, Washington.

SDG	No. Samples	Validation Level
K0504792	11 Sediment	Summary
K0504830	33 Sediment	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements that were reviewed are listed below.

1	Holding Times & Sample Receipt		Laboratory Control Samples (LCS/LCSD)
	GC/MS Instrument Performance Check	1	Laboratory Duplicates
	Initial Calibration (ICAL)	1	Field Replicates
	Continuing Calibration (CCAL)		Target Analyte List
2	Laboratory Blanks		Reporting Limits (MDL and MRL)
1	Field Blanks	2	Compound Identification
	Surrogate Compounds	1	Calculation Verification (Full validation only)

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Holding Times and Sample Receipt

The QAPP-required holding time criterion is one year from date of sampling to date of extraction. The QAPP-required holding time criterion for extracts is 40 days from extraction to analysis. Some samples were extracted outside the holding time of one year, however as all sediment samples were stored in deep freeze, no action was taken. All extracts were analyzed within the holding time criterion.

Laboratory Blanks

To assess the impact of each blank contaminant on the reported sample results, an action level is established at five times the concentration reported in the blank. If a contaminant is reported in an associated field sample and the concentration is less than the action level, the result is qualified as not detected (U-7). If the result is also less than the reporting limit, then the result is elevated to the reporting limit. No action is taken if the sample result is greater than the action level, or for non-detected results.

Method blanks were analyzed at the appropriate frequency. For the analytical batches noted below, residual range hydrocarbons were reported in the method blank. A summary of contaminant levels, associated samples, and action levels is provided in the data validation worksheets.

SDG K0504830: Two sediment method blanks were reported with this SDG. Positive results for residual range organics were reported in the method blanks extracted on 10/18/05 and 11/2/05. The residual range organics results in Samples LW2-C152-E, LW2-C121-D, LW2-C156-F, and LW2-C379-D were less than the action level and were qualified as not detected (U-7).

Field Blanks

Method blanks are used to evaluate all associated samples, field blanks. Any remaining positive results in the field blanks are used to evaluate all associated samples.

SDGs K0504830 & K0504792: No samples identified as field blanks were submitted.

Laboratory Duplicates

No matrix spikes/matrix spike duplicates (MS/MSD) were performed. Accuracy and precision were assessed using the laboratory control sample (LCS) and laboratory duplicate.

SDG K0504792: Laboratory duplicate analyses were performed on Samples LW2-C282-D and LW2-C380-C. The diesel and residual range organics relative percent difference (RPD) values were within the control limit of 30%. Precision was judged to be acceptable.

SDG K0504830: A laboratory duplicate analysis was performed on Sample LW2-C335-E, LW2-C329-A, and LW2-C093-B. The diesel and residual range organics RPD values were within the control limit of 30%. Precision was judged to be acceptable.

Field Replicates

No samples identified as field replicates were submitted.

Compound Identification

SDG K0504792: The chromatographic patterns for Samples LW2-C112-D, LW2-C112-C, LW2-C282-A, LW2-C380-A, and LW2-C112-A did not match that of the diesel or residual range organics standard used for calibration. The diesel and residual results in these samples were flagged by the laboratory and qualified as estimated (J-2).

SDG K0504830: The chromatographic patterns for 23 samples did not match that of the diesel or residual range organics standard used for calibration. The diesel and residual results in these samples were flagged by the laboratory and qualified as estimated (J-2).

Calculation Verification

SDG K0504792: Calculation verifications were performed on this SDG. No calculation errors were found.

IV. OVERALL ASSESSMENT

As was determined by this evaluation, the laboratory followed the specified analytical method. Accuracy was acceptable, as demonstrated by the surrogate and LCS percent recovery values. Precision was also acceptable as demonstrated by the laboratory duplicate RPD values.

Data were qualified because of chromatographic pattern mismatches. Data were also qualified as not detected based on contamination in the associated method blanks.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Analysis of Archived Subsurface Sediments
Metals
Columbia Analytical Laboratories—Kelso

This report documents the review of analytical data from the analyses of archived subsurface sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Laboratories, Inc., Kelso, Washington, analyzed the samples.

SDG	No. Samples	Validation Level
K0504792	6 Archived Cores	Full
K0504830	36 Archived Cores	Summary

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%). No errors were found.

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

1	Technical Holding Times and Sample Preservation
	Initial Calibration (ICAL)
	Calibration Verification (CVER)
	CRDL Standard
2	Laboratory Blanks
1	Field Blanks
	Laboratory Control Samples
2	Matrix Spike Samples
2	Laboratory Duplicates
1	ICP Interference Check Samples
2	ICP Serial Dilution
	ICPMS Internal Standards
1	Field Replicates
	Reporting Limits (MDL and MRL)
	Calculation Verification (Full validation only)

[1] *Quality control results are discussed below, but no data were qualified.*
[2] *Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.*

Technical Holding Times and Sample Preservation

The samples were received at temperatures less than the recommended 4°C ±2°. These core samples were frozen upon collection and remained frozen until analysis. Holding times are extended for metals analysis of frozen samples. No action was taken based on low temperature readings or on extended holding times, with the following exception.

SDG K0504830: Mercury analyses were performed well beyond the QAPP specified 180 day holding time for frozen sediments. All results were positive and were estimated (J-1) to indicate a potential low bias.

CRDL Standard

Contract required detection limit (CRDL) standards were analyzed at the beginning of each analytical sequence. For recoveries greater than upper control limit of 130%, positive results less than two times the CRDL were estimated (J-14) to indicate a potential high bias. For recoveries less than the lower control limit of 70%, positive results less than twice the CRDL and non-detects were estimated (J/UJ-14) to indicate a potential low bias. The following outliers were noted:

SDG K0504792: cadmium (148%), chromium (131%) and lead (174%) – no results were qualified.

Laboratory Blanks

Various analytes were detected in the method and instrument blanks at levels greater than the method detection limits (MDL). To evaluate the effect on the sample data, action levels of five times the blank concentrations were established. Positive results less than the action levels in the associated samples were qualified as not detected (U-7) at the reported concentration. No action was taken for non-detects.

In addition, some analytes were found at levels less than the negative MDL in some instrument blanks. For negative blanks, action levels of five times the absolute value of the blank concentrations were established. Results less than the action levels in the associated samples were qualified as estimated (J/UJ-7) to indicate a potential low bias.

SDG K0504792: Cadmium, lead, nickel, selenium, silver, and zinc were detected in the method and/or instrument blanks at levels greater than the MDL. Some results for cadmium and selenium were less than the action levels and were qualified as not detected (U-7).

SDG K0504830: Cadmium, selenium, and silver were detected in the method and/or instrument blanks at levels greater than the MDL. Some results for these analytes were less than the action levels and were qualified as not detected (U-7).

Matrix Spike Samples

A matrix spike sample (MS) was analyzed at the proper frequency of one per twenty samples or one per batch; whichever was more frequent. The percent recovery (%R) values were within the control limits of 70%-130%, with the exceptions noted below. For %R values greater than 130%, the associated positive results were estimated (J-8) to indicate a possible high bias. No action was taken for non-detects. For %R values less than 70%, the associated positive results non-detects were qualified as estimated (J/UJ-8) to indicate a possible low bias.

SDG K0504792: For both MS/MSD sets (using Samples LW2-C301-A and LW2-C445-D), the %R values for antimony were less than the lower limit of 70%.

SDG K0504830: For both MS/MSD sets (using Samples LW2-C314-D and LW2-C373-D), the %R values for antimony were less than the lower limit of 70%.

Laboratory Duplicates

SDG K0504792: For Sample LW2-C445-D, the relative percent difference (RPD) value for antimony (120%) exceeded the limit of 30%. Results for this analyte in the associated samples were estimated (J-9).

SDG K0504830: For Sample LW2-C314-D, the RPD value for lead (36%) exceeded the limit of 30%. Results for this analyte in the associated samples were estimated (J-9).

ICP Interference Check Samples

SDG K0504830: The concentration of the interfering element iron was greater than the level in the interference check samples (ICSA/ICSAB) in several samples. The ICSA results were carefully evaluated to determine if there was a potential high or low bias caused by iron interference. The ICSA value for nickel was less than the negative MDL. An action level of two times the absolute value of the ICSA result was established. All sample results for nickel were greater than the action level; therefore no data were qualified.

ICP Serial Dilution

SDG K0504792: For QC sample LW2-C301-A, the percent difference (%D) values for nickel (16%) and silver (18%) were greater than the control limit of 10%. The associated results were estimated (J-16).

For QC sample LW2-C445-D, the %D value for silver (22%) was greater than the 10% control limit. Associated results were estimated (J-16).

SDG K0504830: For QC sample LW2-C314-D, the %D value for lead (15%) was greater than the control limit of 10%. The associated results were estimated (J-16).

For QC sample LW2-C373-D, the %D value for silver (25%) was greater than the 10% control limit. Associated results were estimated (J/UJ-16).

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical methods. The laboratory duplicate RPD values indicated acceptable precision, except as noted above. Accuracy was also acceptable, as demonstrated by the MS and laboratory control sample (LCS) %R values, except as previously noted.

Data were qualified as estimated and/or not detected based on laboratory blank contamination. Data were also estimated based on holding time exceedance, MS %R, laboratory duplicate RPD, and serial dilution %D outliers.

All data, as qualified, are acceptable for use.

DATA VALIDATION REPORT
Portland Harbor RI/FS
Analysis of Archived Subsurface Sediments
Conventional Parameter Analyses
Columbia Analytical Services—Kelso

This report documents the review of analytical data from the analyses of archived subsurface sediment samples and the associated laboratory and field quality control (QC) samples. Columbia Analytical Laboratories, Inc., Kelso, Washington.

SDG	No. Samples	Validation Level
K0504569	32 Sediments – TOC	Full
K0504681	40 Sediments – TOC	Summary
K0504682	26 Sediments – TOC	Summary
K0504688	34 Sediments – TOC	Summary
K0504788	19 Sediments – TOC	Summary
K0504915	19 Sediments – TS/GS/SG	Summary
K0504916	20 Sediments – TS/GS/SG	Summary
K0504918	20 Sediments – TS/GS/SG	Summary
K0504923	18 Sediments – TS/GS/SG	Full
K0504924	20 Sediments – TS/GS/SG	Summary
K0504925	20 Sediments – TS/GS/SG	Summary
K0504926	24 Sediments – TS/GS/SG	Summary

The analytical tests that were performed are summarized below:

Parameter	Method
Total Solids (TS)	EPA 160.3
Grain Size (GS)	PSEP 1986
Specific Gravity (SG)	ASTM D-854
Total Organic Carbon (TOC)	Plumb 1981

I. DATA PACKAGE COMPLETENESS

The laboratory submitted all required deliverables. The laboratory followed adequate corrective action processes and all anomalies were discussed in the case narrative.

II. EDD TO HARDCOPY VERIFICATION

A complete (100%) verification of the electronic data deliverable (EDD) results was performed by comparison to the hardcopy laboratory data package. Laboratory QC results were also verified (10%).

SDGs K0504915, K0504916, K0504918, and K0504923: The EDD did not contain the results for the laboratory replicate analysis for grain size.

III. TECHNICAL DATA VALIDATION

The QC requirements for review are listed below.

2	Technical Holding Times and Sample Preservation		Matrix Spike/Matrix Spike Duplicates (MS/MSD)
	Initial Calibration	1	Laboratory Duplicates
	Calibration Verification	1	Field Replicates
2	Laboratory Blanks		Reporting Limits (MDL and MRL)
	Field Blanks	1	Calculation Verification (Full validation only)
	Laboratory Control Samples		

[1] ***Quality control results are discussed below, but no data were qualified.***
[2] ***Quality control outliers that impact the reported data were noted. Data qualifiers were issued as discussed below.***

Technical Holding Times and Sample Preservation

The validation guidance documents state that the cooler temperatures should be within 4°C ±2° upon receipt at the laboratory. Archived sediment samples should be stored at 2° to 6°C for the grain size and specific gravity analyses and deep frozen at -20°C ±4° for all other analyses. The following outliers were noted:

All SDGs: The laboratory received the majority of the sample coolers with temperatures outside the advisory limits. The cooler temperatures at receipt ranged from –5.6° to 0.7°C. These temperature outliers were judged to have no impact on the data, and no action was taken.

The QAPP-required holding time criterion for TOC for archived sediments is one year from date of sampling to date of analysis. The QAPP-required holding time criterion for grain size and specific gravity is 6 months from date of sampling to date of analysis.

All TOC SDGs: Some samples were analyzed outside the holding time of one year, however as all sediment samples were stored in deep freeze and the TOC content should be stable, no qualifiers were applied.

All Grain Size and Specific Gravity SDG: All of the grain size and specific gravity analyses were performed beyond the 6-month holding time criterion. In addition, the sediment samples were frozen, which could potentially alter the results for these tests. Due to this, the results for grain size and specific gravity were estimated (J/UJ-1).

Method Blanks

In order to assess the impact of blank contamination on the reported sample results, action levels at of five times the blank concentrations were established. If the concentrations in the associated field samples were less than the action levels, the results were qualified as not detected (U-7). If the result was also less than the reporting limit, then the result was elevated to the reporting limit.

SDG K0504681: A positive result for TOC was reported in one instrument blank (CCB1 at 0.03%). The TOC result in Sample LW2-C171-D was qualified not detected (U-7).

SDG K0504682: A positive result for TOC was reported in one instrument blank. All associated sample results were greater than the action level; no qualifiers were applied.

SDG K0504688: A positive result for TOC was reported in one method blank and one instrument blank. All associated sample results were greater than the action level; no qualifiers were applied.

Laboratory Replicates

Laboratory duplicate samples (triplicates for grain size) were performed at the required frequency of one per batch. The relative percent difference (RPD) and percent relative standard deviation (%RSD) values were within the control limits of 20%, with the following exceptions:

SDG K0504926: For the triplicate analysis performed using Sample LW2-C455-F, the %RSD value for the Fine Silt fraction (21%) was greater than the control limit. The result for this fraction was estimated (J-9) in the parent and replicate samples.

Field Duplicates

SDG K0504681 and K0504918: Samples LW2-C458-D1 and LW2-C458-D2 were identified as field duplicates. All RPD values were less than the 50% control limit. Field precision was determined to be acceptable.

Calculation Verification

SDG K0504569 (TOC): Several results were verified by recalculation. No calculation or transcription errors were noted.

SDG K0504923 (Total Solids, Grain Size, Specific Gravity): Several results were verified by recalculation; no calculation or transcription errors were noted.

IV. OVERALL ASSESSMENT

As determined by this evaluation, the laboratory followed the specified analytical method. The laboratory and field duplicate RPD and laboratory triplicate %RSD values indicated acceptable precision, with the exception noted above. Accuracy was also acceptable, as demonstrated by the matrix spike and laboratory control sample percent recovery values.

Data were estimated based on improper sample preservation, exceeded holding times, and a laboratory precision outlier. Data were also qualified as not detected based on laboratory blank contamination.

All data, as qualified, are acceptable for use.

LOWER WILLAMETTE GROUP

PORTLAND HARBOR RI/FS

ROUND 1 SITE CHARACTERIZATION REPORT

APPENDIX B

SURFACE SEDIMENT SAMPLE DEPTH EVALUATION

October 12, 2004

DRAFT DOCUMENT: DO NOT QUOTE OR CITE
This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

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Lower Willamette Group

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Integral Consulting, Inc.

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1.0 INTRODUCTION

As part of the Portland Harbor Remedial Investigation (RI), four bathymetric surveys of the lower Willamette River (LWR) have been conducted between January 2004 and February 2004. Integral previously presented comparisons of data from the first three surveys, completed in January 2002 (T1), September 2002 (T2), and May 2003 (T3) in SEA et al. (2003) (T1 versus T2) and Integral et al. (2004) (T1 and T2 versus T3). These detailed reviews of the bathymetric changes over time revealed trends in the magnitude, direction (i.e., shallowing versus deepening), and spatial distribution of riverbed elevation changes in the LWR, and this information was used to establish the 30-cm (1-foot) surface sediment sampling interval for the Round 2 nature and extent sediment sampling program. Based on the riverbed elevation changes measured from January 2002 through May 2003, it was concluded that a surface sediment sample interval of 30 cm would capture the riverbed elevation change observed over this 16-month period across 95% of the channel and 87% of the nearshore area (Integral et al. 2004).

Review of historical river stage data on the Willamette River during the period in which the first three bathymetric surveys were conducted indicated that this period represented relatively typical hydrologic conditions on the river; therefore, the predominantly small-scale (< 30 cm) changes observed across most of the survey area were are also considered representative of typical conditions. EPA and its agency partners expressed concern that sediment deposition and erosion patterns in the LWR might differ considerably (both qualitatively and/or quantitatively) during a high-flow or flood event and requested that another survey be conducted should a flow event greater than 100,000 cubic feet per second (cfs) occur.

On January 31 and February 1, 2004, a flow event that peaked at approximately 130,000 cfs occurred in the LWR. An immediate post-event precision bathymetric survey was initiated on February 6 and continued into early March. The February 2004 survey (T4) was conducted over the same 15-mile stretch of the river that had been surveyed previously. This document compares the results of this fourth, post-high-flow event survey with the results of the preceding survey conducted in May 2003 (T3), as well as with the results the initial survey conducted 25 months previously during the winter of 2002 (T1).

The objectives of this analysis are to 1) to assess the total amount of net change observed in the LWR over the 25-month period of riverbed elevation measurements; 2) compare the post-high-flow event patterns of deposition, erosion, and no change with previous observations; and 3) to review the appropriateness of the 30-cm surface sediment sampling interval used during the 2004 Round 2 sediment sampling program.

2.0 TECHNICAL APPROACH

The technical approach used in this analysis follows that used previously (Integral et al. 2004). Two sets of maps showing bathymetric change were generated by comparing 1) the January 2002 and February 2004 data sets, and 2) the May 2003 and February 2004 data sets (see Figures 3 and 4 in Integral and DEA 2004). The bathymetric change maps were created by gridding the bathymetric sounding data from each survey into 1-square-meter cells (approximately 10.8 ft^2). The average depth within each cell was then compared between surveys, and a direction and magnitude of change for each cell was tabulated (Tables B-1a, B-1b, B-2a, and B-2b). The vertical resolution of the multibeam survey is ± 0.25 foot, so cell comparisons that show positive or negative change less than or equal to 0.25 foot are considered to represent no change in riverbed elevation.

In the analysis, the early data are subtracted from the later data so negative elevation changes indicate shallowing and positive elevation changes indicate deepening. In addition, data from areas that were known to be dredged, as well as erroneous data resulting from interferences with in-water or overwater structures that affected navigational accuracy (Integral and DEA 2004), were removed from the relevant data sets. These anthropogenic and artifactual elevation changes were identified and removed during the data processing for this evaluation.

Tables B-1a and B-1b show the total cell counts by river mile (RM) for nearshore and channel zones, respectively, for the January 2002 to February 2004 data comparison (T1T4). Similarly, Tables B-2a and B-2b show the total cell counts for the nearshore and channel areas for the 2003 to February 2004 (T3T4) data comparison. Tables for the T1T2 and T2T3 comparisons were presented in Integral et al. (2004). The cell counts presented in the tables are grouped into *No Change*, *Shallowing*, and *Deepening* categories. Known dredged areas and clearly identifiable erroneous data have been removed from the data sets. The no-change category is defined as ±0.25 foot. The percentage of the area within each river mile that falls within each of these three categories is shown at the bottom of each table.

The definition of the nearshore and channel areas is based on the results of the December 2001 LWR sediment-profile imaging (SPI) (SEA 2002b). In that survey, the sediment transport regimes inferred from the SPI results in the deeper portions of the LWR (channel and lower channel slopes) differed notably from those inferred for the nearshore areas (upper channel slope, off-channel benches and beaches). The division between these "channel" and "nearshore" areas was delineated by the –15 foot North American Vertical Datum of 1988 (NAVD88) contour, which equates approximately to the –20 foot Columbia River Datum (CRD) contour in the survey area. Figure B-1 illustrates the nearshore and channel areas defined by the NAVD88 –15-foot contour, as well as sediment transport regimes identified along the channel that are referred to below (SEA 2002a).

3.0 DATA EVALUATION AND DISCUSSION OF BATHYMETRIC CHANGES

3.1 CHANGE DATA

3.1.1 25-Month Period from January 2002 to February 2004 (T1T4)

Data presented in Tables B-1a and B-1b show that areas of shallowing and deepening generally make up a larger percentage of the total area in the shallow, nearshore portion of the site than in the main navigation channel. The numbers of cells showing change account for 70% of the total cells in the nearshore zone and 59% of the cells in the channel zone. Figures B-2a and B-2b show the percentages of cells in nearshore and channel zones, respectively, within each river mile segment that account for no change, shallowing, and deepening in the T1T4 comparison.

Nearshore Areas

Across all nearshore areas combined, approximately 30% of the riverbed shows no change in elevation between the two surveys, while 54% of the area deepened measurably and 16% shallowed. The cumulative percent of the nearshore area shallowing and deepening by vertical change interval is shown in Table B-1a. The magnitude and the extent of vertical change are generally greater in nearshore areas than in the channel. Still, over 77% of the cells that exhibit vertical change show change that is less than or equal to 1 foot (shaded rows), and over 96% of the shallowing cells and 94% of the deepening cells show changes of less than or equal to 2 feet. When combined with the no-change cells, the percentage of the total area of the nearshore riverbed that shows vertical change (either shallowing or deepening) greater than 1 foot is approximately 15% (i.e., 85% shows less than one foot of change). This represents a total nearshore area of about 246,047 m^2.

Channel Areas

Across all channel segments combined, 41% of the riverbed showed no change in elevation between the two surveys, while 36% of the area deepened measurably and 23% shallowed. The cumulative percent of the channel area that is shallowing and deepening by vertical change interval is shown in Table B-1b. Over 74% of shallowing cells and over 93% of deepening cells exhibit vertical change less than or equal to 1 foot (shaded rows). When the no-change cells are included, only about 8% of the total area of the channel riverbed shows vertical change (either shallowing or deepening) greater than 1 foot. This represents a total channel area of about 736,945 m^2.

Generalized Bathymetric Change Maps

To assess the extent and spatial distribution of the LWR areas where the T1T4 elevation changes exceed ± 1 foot, cells exhibiting shoaling and deepening greater than 1 foot were combined into two large categories, and the no-change category was expanded to included all changes up to ± 1 foot. Using this classification scheme, a simplified series of bathymetric change maps were generated and are shown in Figures B-3a through B-3g. These maps show the distribution of elevation changes greater than 1 foot throughout the LWR. Dredged areas are included in this mapped data set, so nearshore areas that have been dredged in this timeframe (e.g., the Port's Terminals 2 and 4 and the Willbridge Fuel docks), are evident. Nearshore areas generally show more change and more variable change (i.e., both accretion and erosion) than channel areas. However, large continuous areas of shoaling are evident in the channel at RM 2, from RM 8 to 10, and in former dredged areas between RM 10 and 11. These are the expected areas of sediment accumulation based on historic channel maintenance dredging operations (Integral et al. 2004).

3.1.2 9-Month Period from May 2003 to February 2004 (T3T4)

The changes measured between the May 2003 survey and the immediate post-high-flow event in February 2004 are compiled in Tables B-2a and B-2b. These tables show that the numbers of cells showing change account for only 29% of the total cells in the nearshore zone and 19% of the cells in the channel zone. Figures B-4a and B-4b show the percentages of cells in nearshore and channel zones, respectively, within each river mile segment that account for no change, shallowing, and deepening in the T3T4 comparison.

Nearshore Areas

Across all nearshore areas combined, approximately 71% of the riverbed shows no change in elevation between the two surveys, while 20% of the area deepened measurably and 9% shallowed. The cumulative percent of the nearshore area shallowing and deepening by vertical change interval is shown in Table B-2a. Over 88% of shallowing cells and over 91% of deepening cells exhibit vertical change less than or equal to 1 foot (shaded rows), and over 98% of the cells that show vertical change show change that is less than or equal to 2 feet. In total, approximately 3% of the nearshore riverbed shows vertical change (either shallowing or deepening) greater than 1 foot. This is equivalent to a total nearshore area of about 51,109 m^2.

Channel Areas

Across all channel segments combined, 80% of the riverbed shows no change in elevation between the two surveys, while 9% of the area deepened measurably and 10% shallowed. The cumulative percent of the channel area that is shallowing and deepening by vertical change interval is also provided in Table B-2b. Over 94% of shallowing cells and over 96% of deepening cells exhibit vertical change less than or equal to 1 foot (shaded rows), and over 99% of the cells show vertical change that is less than or equal to 2 feet. In total, only about 1% of the total area of the channel riverbed shows vertical change (either shallowing or deepening) greater than 1 foot, which represents a total channel area of about 82,190 m^2.

3.1.3 Spatial Patterns in the Distribution of No-Change, Shallowing, and Deepening Areas

The percentages of the area within each river mile showing no change, shallowing, and deepening over the T1T4 and T3T4 study periods were graphed for the channel and nearshore zones (Figures B-2a, B-2b, B-4a, and B-4b). Patterns exhibited by the data are discussed in the following paragraphs.

T1T4 Patterns

In the nearshore, deepening cells are the dominant in virtually every river mile, particularly RMs 0-4, 6-10, and 12-14. The proportion of no-change cells varies only between 20 to 39% across the entire study area, peaking between RM 5-6 and again between RM 14-15.7. Shallowing cells do not dominate any of the nearshore areas, but peaks in the relative proportion of shallowing cells occur in RMs 4-5 and 11-12.

In the channel, deepening cells are most dominant between RMs 5-7 and RM 10-15.7, which is consistent with the previous classification of these segments as nondepositional environments (Integral et al. 2004). No-change cells dominate RMs 3-5 and RM 7-9, which have been characterized as transitional and depositional zones, respectively. Shallowing cells peak in RM 2-3 and RM 9-10, which is consistent with their characterization as depositional zones.

T3T4 Patterns

No-change cells clearly dominate both the channel and nearshore areas during the T3T4 time period (post-high-flow event conditions). In the nearshore zones, deepening is the second-most dominant change seen over the T3T4 time period, comprising between13 to 36% of each river mile segment. Deepening in the nearshore peaks at RM 4-5. The T1T4 generalized bathymetric change maps indicate that this deepening is likely associated with dredging or other anthropogenic factors in the Terminal 4 area. Shallowing comprises only between 2 to 18% of the nearshore areas during T3T4.

In the channel, there is only one segment where no-change cells do not comprise the majority of the area: RM 9-10, where shallowing occurs over nearly half the area. This reach is the upstream portion of the large depositional that occurs from RM 7 to 10 where the river channel widens (Integral et al. 2004). This depositional zone appears to act a trap for much of the sediment entering the ISA from upstream. Shallowing comprises only 23% or less in all other RM segments. Deepening does not comprise more than 21% of any channel segment during this time period.

3.2 SURFACE LAYER SAMPLE INTERVAL

The surface layer sample interval for the Round 2 sediment sampling effort was defined as the top 1 foot (30 cm) of sediment, based on the previous bathymetric change evaluations (Integral et al. 2004). Consistent with the previous data, the T1T4 bathymetric data also indicate that the majority of changes are 1 foot or less in magnitude. Areas with less than 1-foot riverbed elevation change account for approximately 92% of the total channel area and 85% of the total nearshore area over the 25-month T1T4 period (Tables B-1a and B-1b) across the entire surveyed area; this compares closely with 95% of total channel area and 87% of the total nearshore area over the 16-month T1T3 period (Integral et al. 2004).

The percentage areas with change of 1 foot or less in magnitude for the 25-month T1T4 period were calculated for each river mile from the data in Tables B-1a and B-1b, and are summarized in the following table:

River Mile	Nearshore	Channel
0-1	70%	95%
1-2	88%	92%
2-3	91%	94%
3-4	90%	99%
4-5	77%	95%
5-6	85%	97%
6-7	88%	98%
7-8	85%	99%
8-9	85%	89%
9-10	87%	65%
10-11	77%	91%
11-12	82%	93%
12-13	46%	95%
13-14	90%	97%
14-15.7	83%	86%

The Round 2 surface sampling grid extends from RM 2 to 11 (Integral et al. 2004). Over this portion of the LWR on river-mile-by-river-mile basis, the percentage area with changes of 1 foot or less ranges from 77 to 91% for the nearshore region and from 65 to 99% for channel (the 65% represents the depositional area at the upstream end of the ISA; the next lowest value is 89%).

4.0 CONCLUSIONS

Comparing bathymetric data over the 25-month T1T4 period indicates that a large portion (41%) of the riverbed in the channel zones shows no change in elevation between the two surveys. Within the nearshore areas, deepened areas are dominant (54%) over areas that showed no change (30%) or shallowed (16%). Overall, 92% of the total channel area and 85% of the total nearshore area surveyed shows less than 1-foot riverbed elevation change over the 25-month measurement period; this is consistent with previous temporal comparisons.

The post-high-flow event data show that the February 2004, 130,000-cfs event had relatively little effect on the study area, with only 2.8% of the nearshore and 0.9% of the channel areas showing changes greater than 1 foot in magnitude. The channel depositional zone from RM 9 to 10 was the only segment not dominated by cells showing no change. The magnitude and pattern of riverbed elevation changes observed following this event are not notably different than the changes observed previously (Integral et al. 2004).

Direct measurements of riverbed elevation changes in 2004 are consistent with previous evaluations of the LWR physical system. The 1-foot (30-cm) surface sediment sampling interval used in Round 2 nature and extent sampling should capture changes in riverbed elevations over the great majority of the Portland Harbor RI/FS site.

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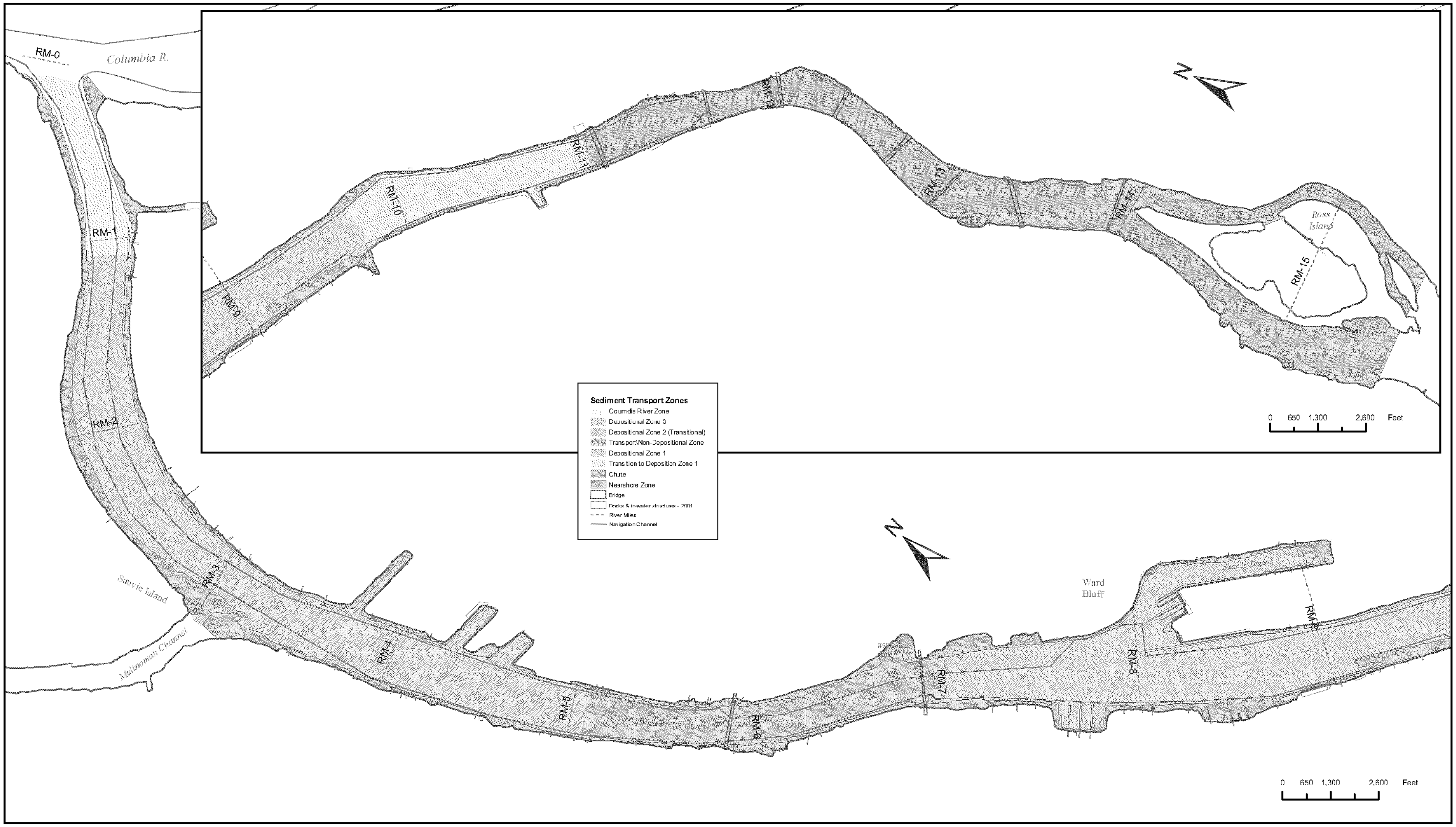
SEA. 2002b. Sediment Profile Image Survey of Lower Willamette River. Prepared for Lower Willamette Group, Portland, OR. Striplin Environmental Associates, Inc., Olympia, WA. (April 26, 2002).

SEA, Windward, Kennedy/Jenks, Anchor, and GSI. 2003. Portland Harbor RI/FS Programmatic Work Plan. Revised Draft Final. Prepared for Lower Willamette Group, Portland, WA. Striplin Environmental Associates, Inc., Olympia, WA. (November 13, 2003).



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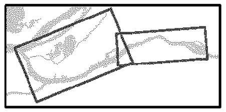

FEATURE SOURCES:
Transportation, Property, Zoning or Boundaries: Metro RLIS .
Channel & River miles: Developed from US Army Corps of Engineers information.
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River Edge: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
Docks & In-water Structures: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
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PLOT DATE: 12/18/03

Figure B-1
Portland Harbor RI/FS
Round 2 Field Sampling Plan Appendix B
Nearshore and Channel Areas and
Sediment Transport Zones

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Figure B-2a. Nearshore Area (<20' CRD) Bathymetry Changes (January 2002 to February 2004)

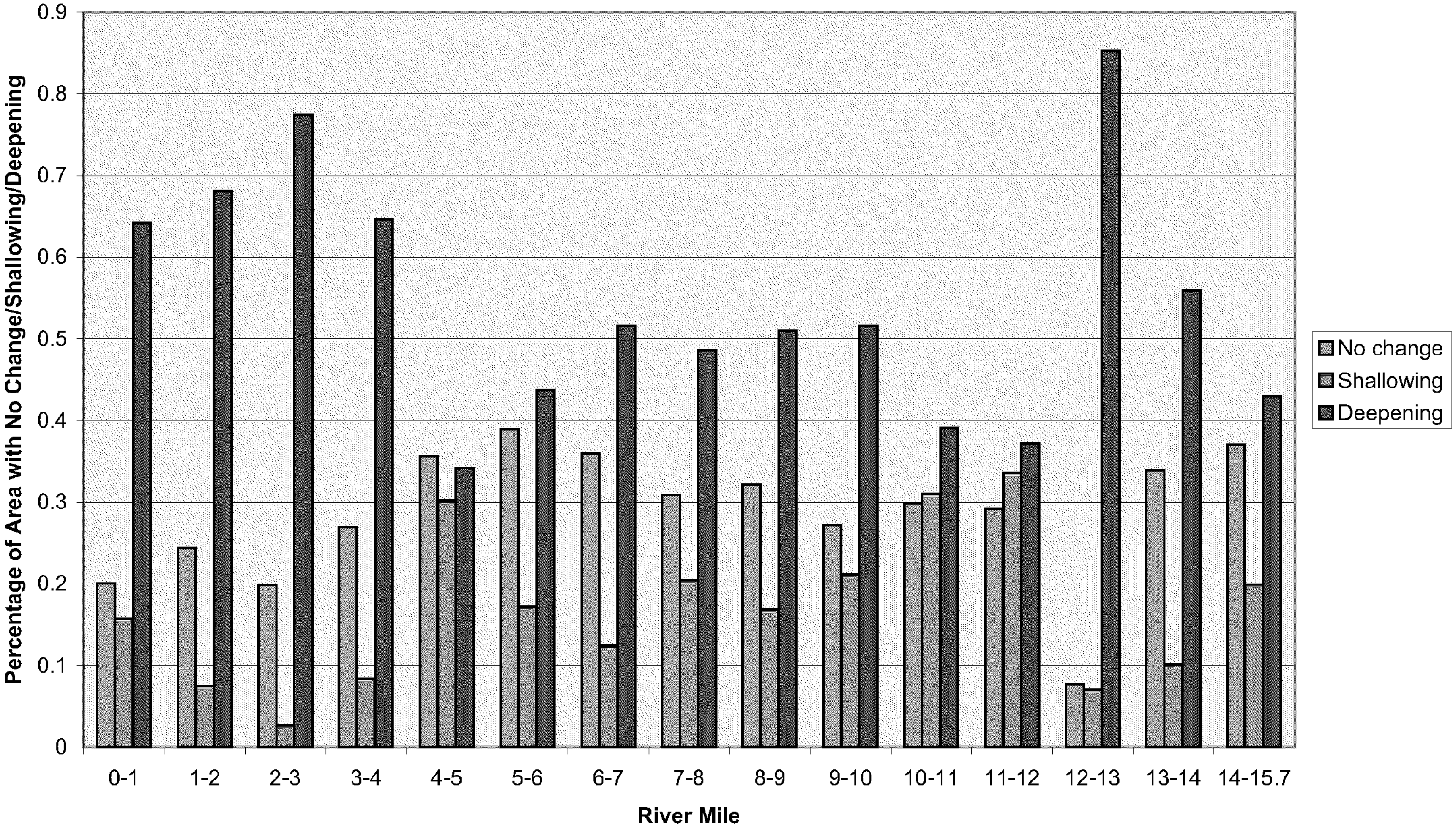
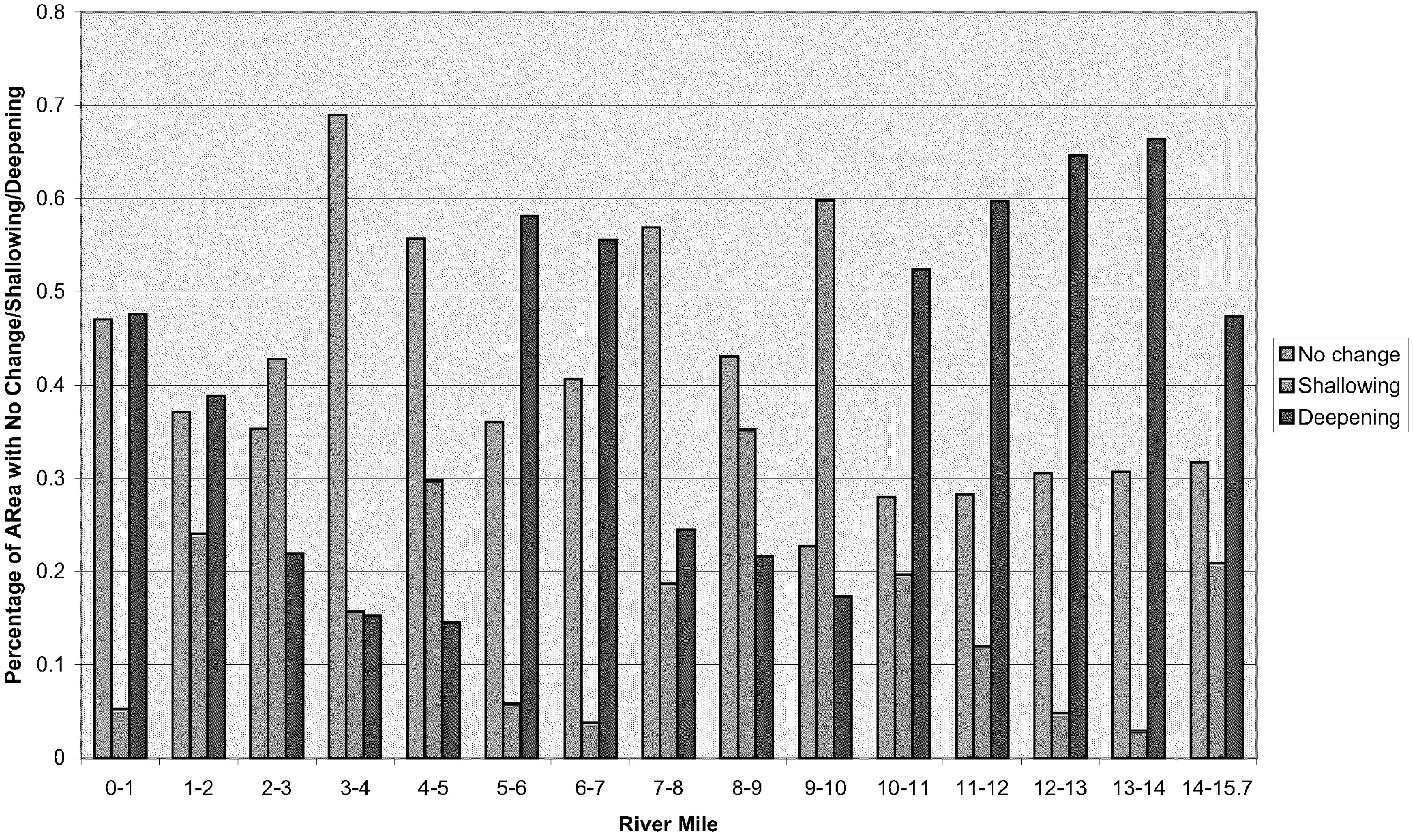


Figure B-2b. Channel Area (>20' CRD) Bathymetry Changes (January 2002 to February 2004)



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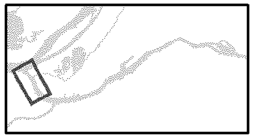

2001 Bathymetry Contour -15'
River Edge - 2001
Bridge
Docks & in-water Structures - 2001
River Miles
Navigation Channel

FEATURE SOURCES:
Bathymetric Data: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. in Dec, 2001/Jan, 2002 and in Feb. 2004/March, 2004.
Difference in Bathymetry: Values of the grid nodes for the Winter 2004 survey were subtracted from grid node values for the Winter 2002 survey to produce this diference grid.
Seven overlaping data files are shown in these data sheets.
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Channel & River miles: Developed from USACOE information.
River Edge, Docks & In water Structures: created by digitizing on October 2001 0.33 ft. resolution color orthophotos.
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PLOT DATE: 08/18/04.

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Figure B-3a
Portland Harbor RI/FS
Round 1 Site Characterization Summary Report
Generalized Bathymetric Change; T1 to T4

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ANC03435

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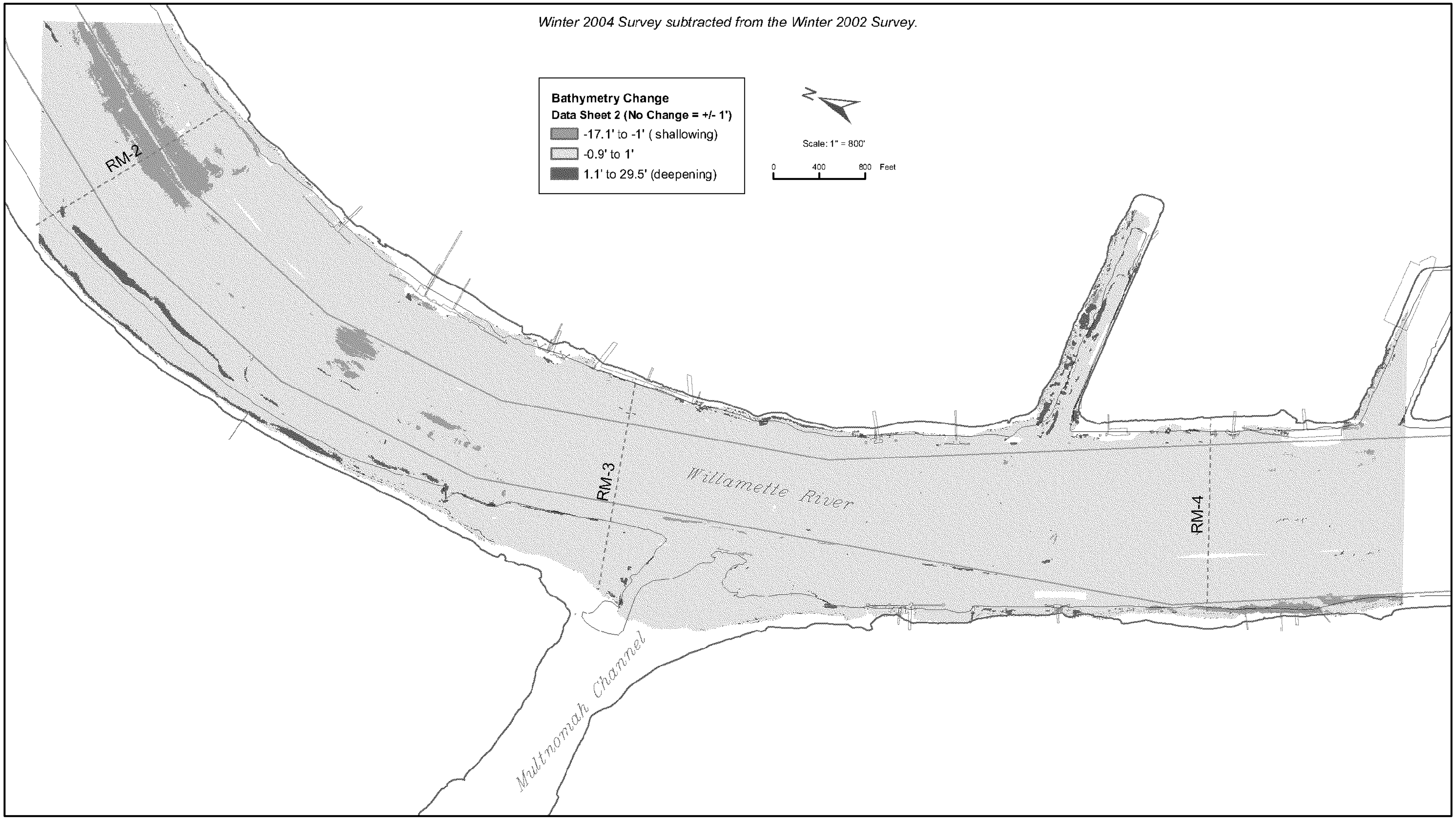

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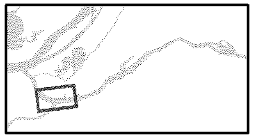

2001 Bathymetry Contour -15'
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Navigation Channel

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Figure B-3b
Portland Harbor RI/FS
Round 1 Site Characterization Summary Report
Generalized Bathymetric Change; T1 to T4

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Winter 2004 Survey subtracted from the Winter 2002 Survey.

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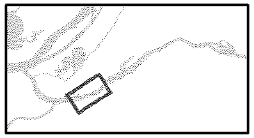

2001 Bathymetry Contour -15'
River Edge - 2001
Bridge
Docks & in-water Structures - 2001
River Miles
Navigation Channel

FEATURE SOURCES:
Bathymetric Data: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. in Dec, 2001/Jan, 2002 and in Feb. 2004/March, 2004.
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Figure B-3c
Portland Harbor RI/FS
Round 1 Site Characterization Summary Report
Generalized Bathymetric Change; T1 to T4

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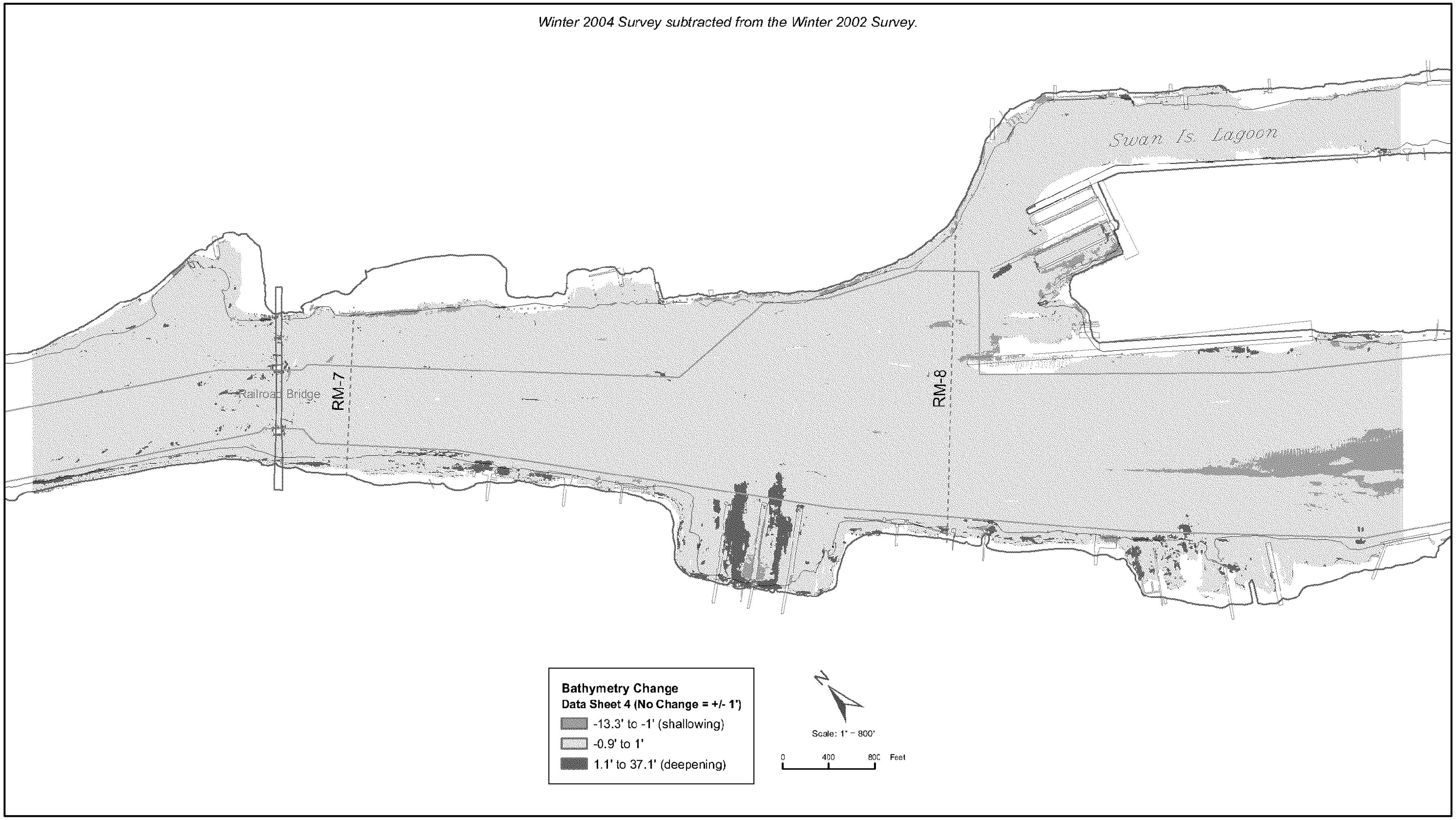

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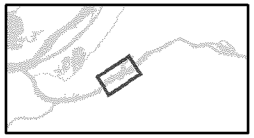

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- Bridge
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- River Miles
- Navigation Channel

FEATURE SOURCES:
Bathymetric Data: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. in Dec, 2001/Jan, 2002 and in Feb. 2004/March, 2004.
Difference in Bathymetry: Values of the grid nodes for the Winter 2004 survey were subtracted from grid node values for the Winter 2002 survey to produce this difference grid.
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Figure B-3d
Portland Harbor RI/FS
Round 1 Site Characterization Summary Report
Generalized Bathymetric Change; T1 to T4

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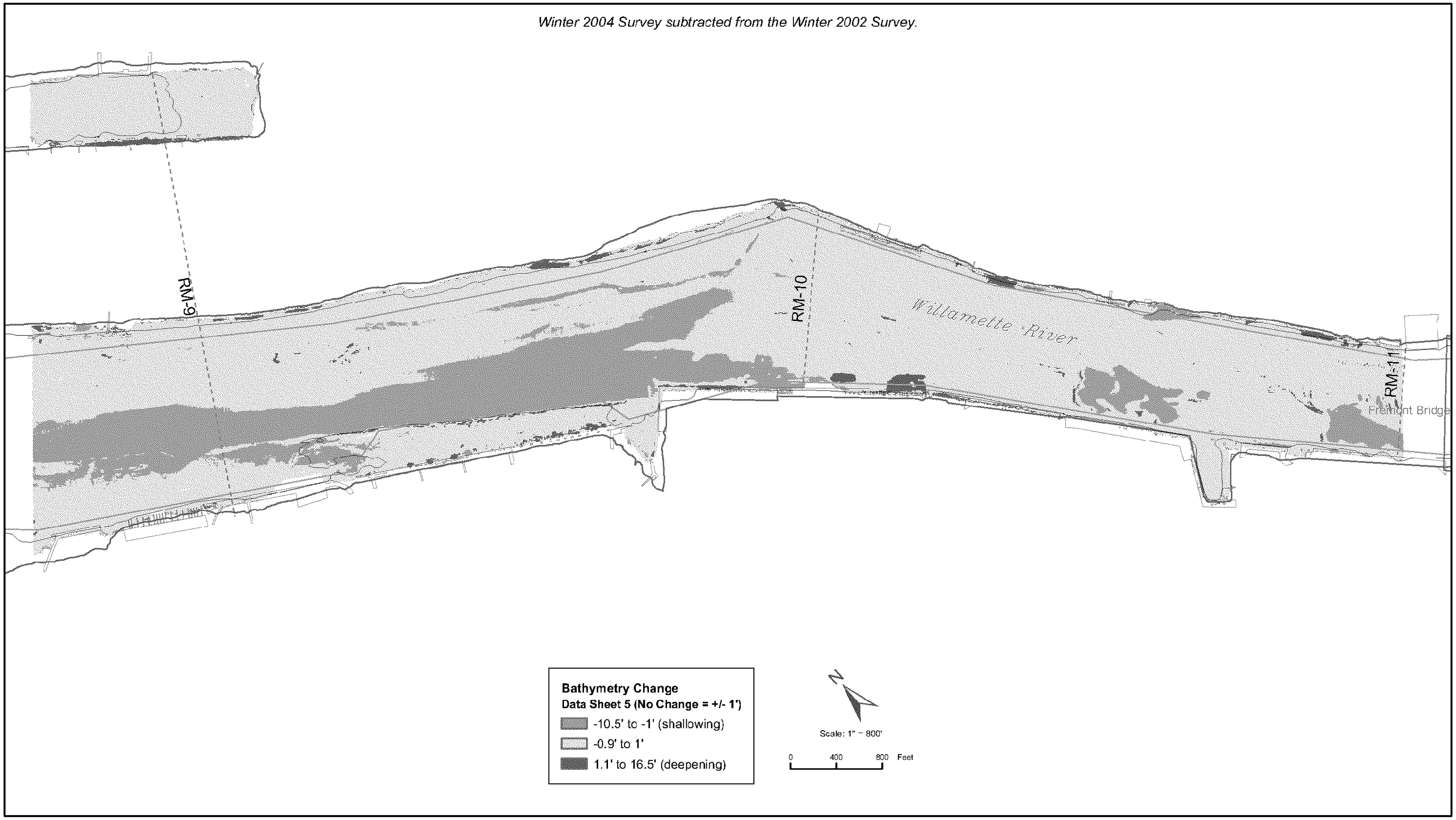

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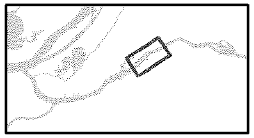

2001 Bathymetry Contour -15'
River Edge - 2001
Bridge
Docks & in-water Structures - 2001
River Miles
Navigation Channel

FEATURE SOURCES:
Bathymetric Data: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. in Dec, 2001/Jan, 2002 and in Feb. 2004/March, 2004.
Difference in Bathymetry: Values of the grid nodes for the Winter 2004 survey were subtracted from grid node values for the Winter 2002 survey to produce this diference grid.
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Figure B-3e
Portland Harbor RI/FS
Round 1 Site Characterization Summary Report
Generalized Bathymetric Change; T1 to T4

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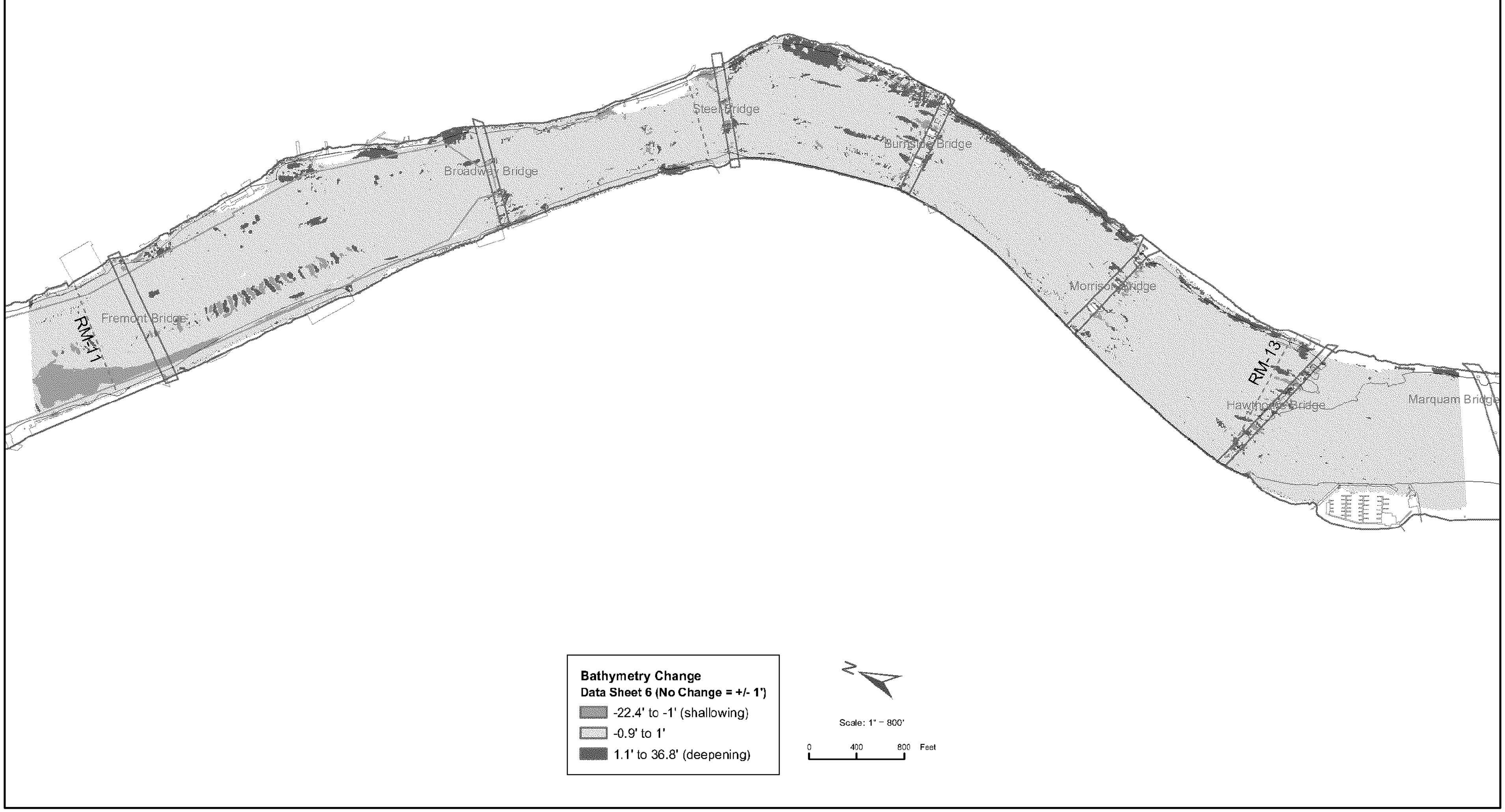
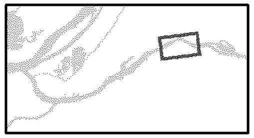
Winter 2004 Survey subtracted from the Winter 2002 Survey.



LWG
LOWER WILLAMETTE GROUP
integral



2001 Bathymetry Contour -15'
River Edge - 2001
Bridge
Docks & in-water Structures - 2001
River Miles
Navigation Channel

FEATURE SOURCES:
Bathymetric Data: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. in Dec, 2001/Jan, 2002 and in Feb. 2004/March, 2004.
Difference in Bathymetry: Values of the grid nodes for the Winter 2004 survey were subtracted from grid node values for the Winter 2002 survey to produce this diference grid.
Seven overlaping data files are shown in these data sheets.
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS .
Channel & River miles: Developed from USACOE information.
River Edge, Docks & In water Structures: created by digitizing on October 2001 0.33 ft. resolution color orthophotos.
File name: Figure_3a-g_change-3classes-2004.mxd
PLOT DATE: 08/18/04.

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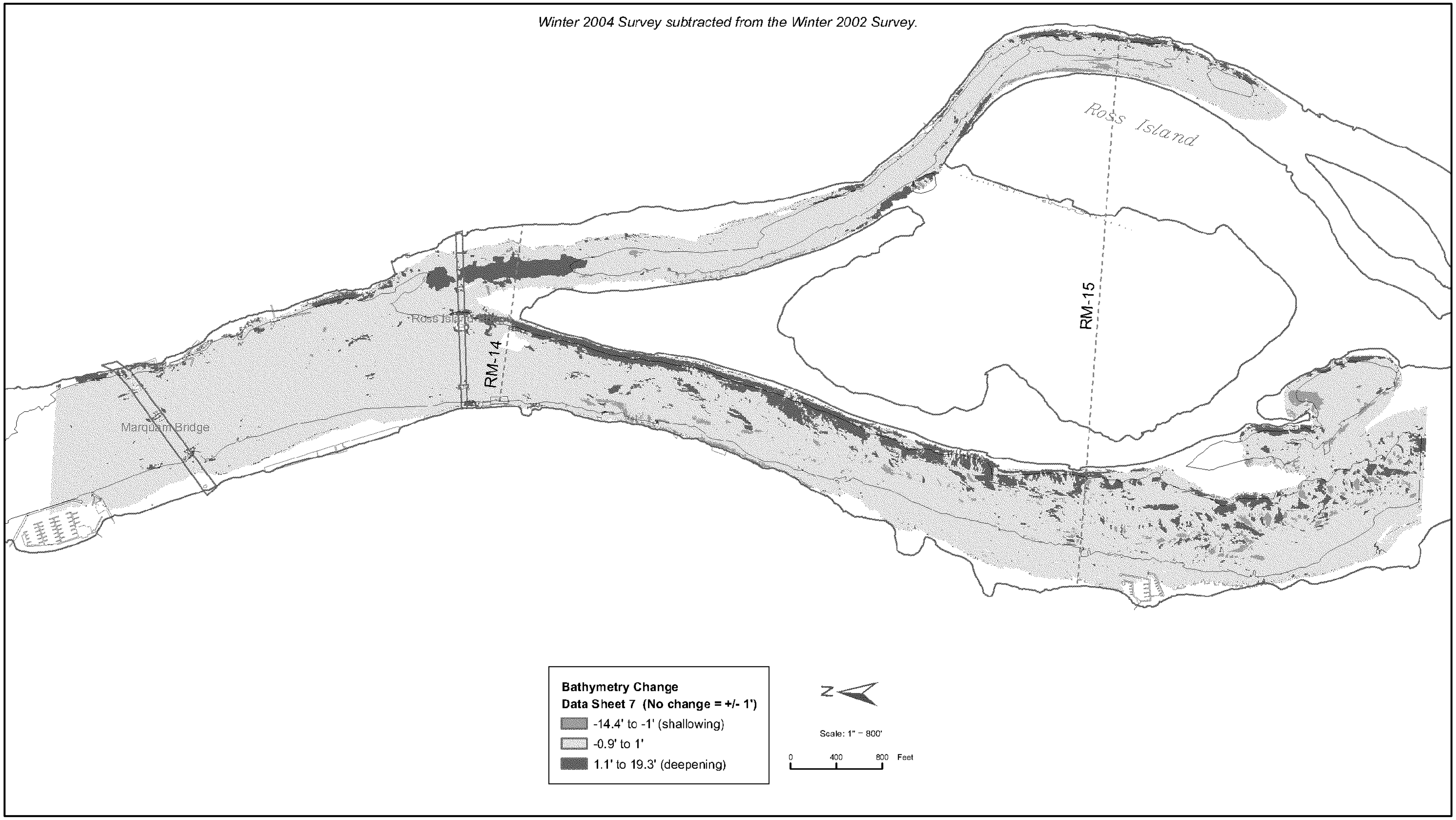
Figure B-3f
Portland Harbor RI/FS
Round 1 Site Characterization Summary Report
Generalized Bathymetric Change; T1 to T4

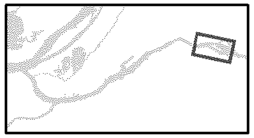
BZTO104(e)003440
ANC03440

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Bathy-Change\Figure_3a-g_1-4_change-3classes-2004.mxd)8/18/2004 -- 12:13:01 PM



LWG LOWER WILLAMETTE GROUP

integral



2001 Bathymetry Contour -15'
River Edge - 2001
Bridge
Docks & in-water Structures - 2001
River Miles
Navigation Channel

FEATURE SOURCES:
Bathymetric Data: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. in Dec, 2001/Jan, 2002 and in Feb. 2004/March, 2004.
Difference in Bathymetry: Values of the grid nodes for the Winter 2004 survey were subtracted from grid node values for the Winter 2002 survey to produce this diference grid.
Seven overlaping data files are shown in these data sheets.
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS .
Channel & River miles: Developed from USACOE information.
River Edge, Docks & In water Structures: created by digitizing on October 2001 0.33 ft. resolution color orthophotos.
File name: Figure_3a-g_change-3classes-2004.mxd
PLOT DATE: 08/18/04.

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Figure B-3g
Portland Harbor RI/FS
Round 1 Site Characterization Summary Report
Generalized Bathymetric Change; T1 to T4

ANC03441
BZTO104(e)003441

Figure B-4a. Nearshore Area (<20' CRD) Bathymetry Changes (May 2003 to February 2004)

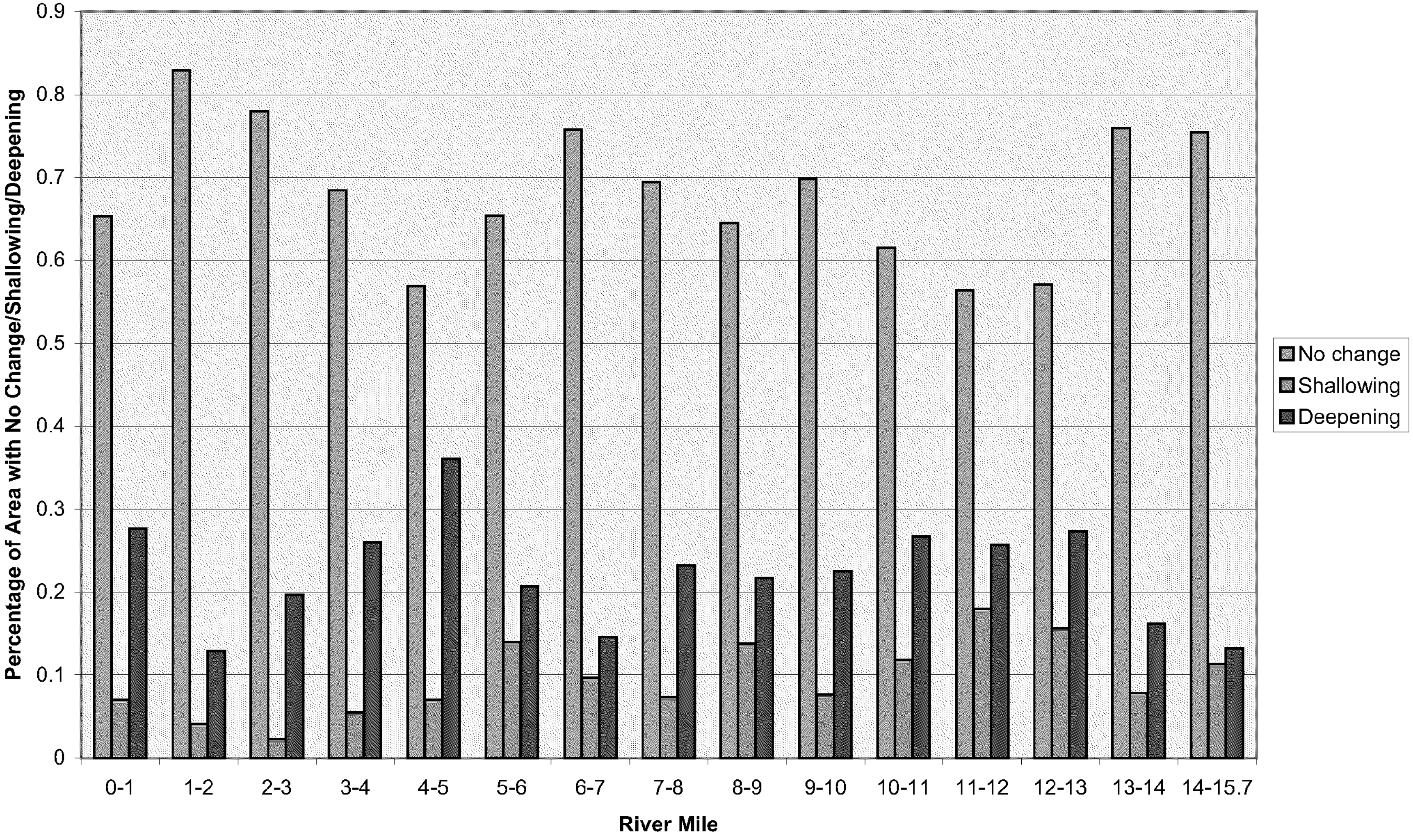


Figure B-4b. Channel Area (>20' CRD) Bathymetry Changes (May 2003 to February 2004)

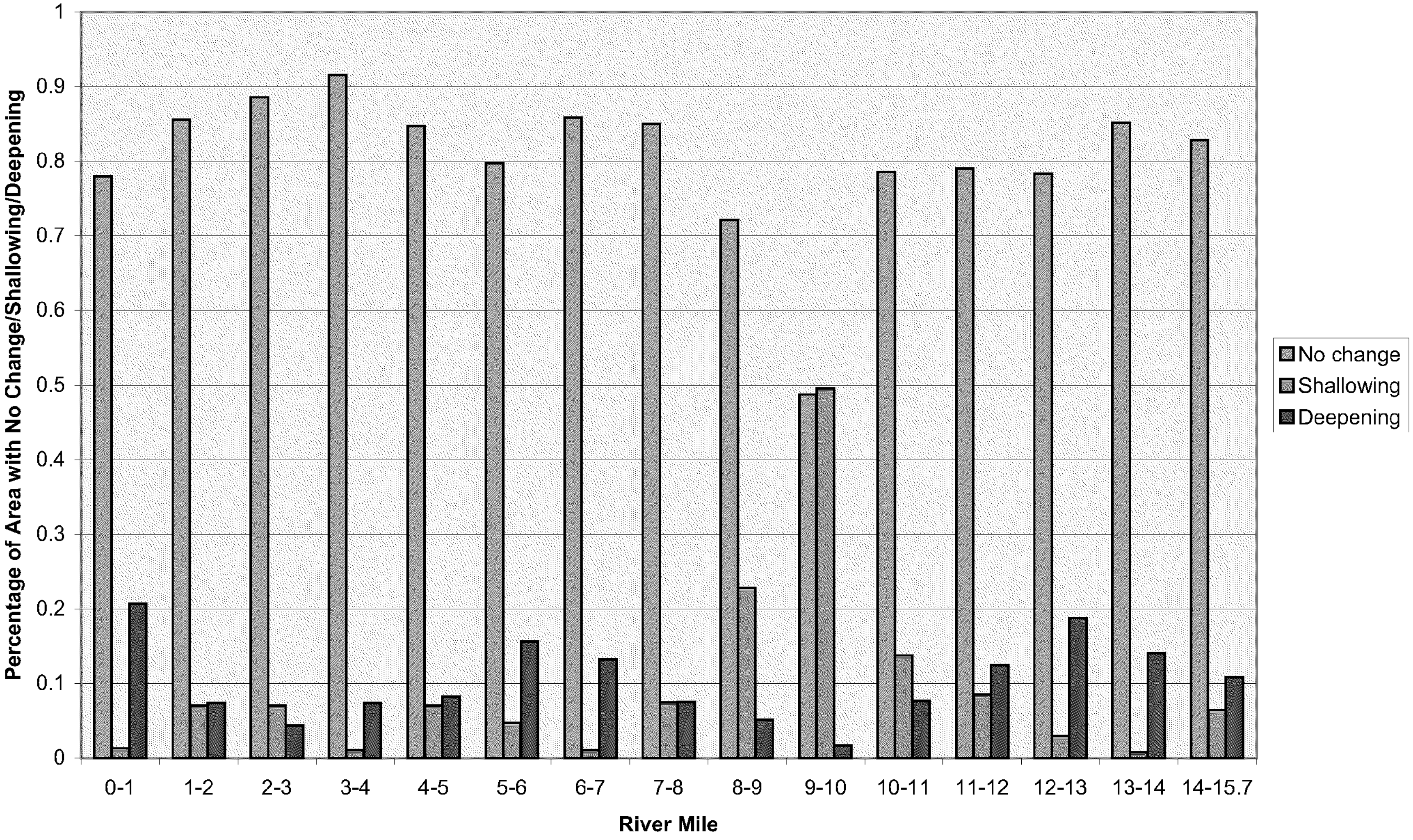


Table B-1a. Evaluation of T1T4 Bathymetric Change in Nearshore (<20' CRD) Areas Based on 1 Square Meter Cell Counts (Dredged Area Data Removed).

							River Mile										
Bathymetric Change	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15.7	Totals	
No Change (# of cells)																	% No Change
+/- 0.25'	15871	22914	27346	35642	21137	17217	31675	26869	39940	44547	12093	13209	1577	45134	131229	486,400	30.35%
Shallowing (# of cells)																	% Shallowing (cumulative)
-0.5 - -0.25	5403	3742	2078	4948	4960	3625	5239	5923	7749	13299	4389	6267	421	7425	28626	104,094	40.46
-1 - -0.5	5802	2476	1220	3943	5766	2774	3870	6533	6933	13356	4696	6036	400	4667	28097	96,569	77.99
-2 - -1	1109	704	319	1883	5698	932	1435	4137	4702	7630	2308	2309	321	1149	12516	47,152	96.32
-3 - -2	108	76	25	251	1106	172	336	1017	1186	305	377	322	219	230	1031	6,761	98.94
-4 - -3	19	11	3	54	314	91	92	157	213	83	200	154	71	44	154	1,660	99.59
-5 - -4	4	0	3	23	48	12	9	16	63	11	214	69	8	8	42	530	99.80
-6 - -5	1	0	0	3	10	4	1	5	16	0	145	16	6	0	17	224	99.88
-7 - -6	0	0	0	0	5	0	0	3	4	0	105	17	1	1	12	148	99.94
-8 - -7	0	0	0	0	1	0	0	6	0	0	67	6	0	1	9	90	99.98
-9 - -8	0	0	0	0	1	0	0	0	0	0	13	8	0	0	11	33	99.99
-10 - -9	2	0	0	0	0	0	0	0	0	0	9	4	0	0	3	18	100.00
-30 - -10	1	0	0	0	0	0	0	0	0	0	4	4	0	0	3	12	100.00
-55 - -30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.00
Total cells shallowing	12449	7009	3648	11105	17909	7610	10982	17797	20866	34684	12527	15212	1447	13525	70521	257,291	
Deepening (# of cells)																	% Deepening (cumulative)
0.5-0.25	6928	30248	69951	51135	6100	7430	19287	15382	23867	46897	4175	5357	1581	41049	60759	390,146	45.43
0.5-1	20999	23229	25039	23323	7466	6663	17747	19001	26749	24894	5638	6045	5527	21440	45490	279,250	77.94
1-2	16026	7020	10021	7599	5069	4040	6825	5882	9010	9696	4463	3230	8060	8874	34367	140,182	94.27
2 - 3	3946	2041	900	1926	1153	784	1248	1191	2053	2307	1120	1517	1810	208	7407	29,611	97.71
3 - 4	1927	858	483	719	254	257	309	705	594	694	261	514	396	-3388	-2388	2,195	97.97
4 - 5	609	287	152	263	89	81	61	118	336	62	96	126	75	509	290	3,154	98.34
5 - 6	173	171	26	48	34	26	5	49	250	15	30	31	27	941	984	2,810	98.66
6 - 7	52	64	5	34	16	16	1	11	148	1	20	13	13	1122	1056	2,572	98.96
7 - 8	25	34	9	60	16	11	1	4	101	0	10	1	2	1082	1175	2,531	99.26
8 - 9	12	7	5	82	10	3	1	1	76	0	2	1	1	1056	924	2,181	99.51
9 - 10	2	20	1	67	13	6	0	0	52	0	1	0	1	894	1080	2,137	99.76
10-45	10	23	0	224	35	13	2	0	114	0	5	3	0	708	909	2,046	100.00
Total cells deepening	50709	64002	106592	85480	20255	19330	45487	42344	63350	84566	15821	16838	17493	74495	152053	858,815	
TOTAL CELLS	79029	93925	137586	132227	59301	44157	88144	87010	124156	163797	40441	45259	20517	133154	353803	1,602,506	

Percentages	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15.7	
No change	20%	24%	20%	27%	36%	39%	36%	31%	32%	27%	30%	29%	8%	34%	37%	30%
Shallowing	16%	7%	3%	8%	30%	17%	12%	20%	17%	21%	31%	34%	7%	10%	20%	16%
Deepening	64%	68%	77%	65%	34%	44%	52%	49%	51%	52%	39%	37%	85%	56%	43%	54%

Total Shallowing, Deepening (> +/- 1ft)/Total cells 15.4%
Total Nearshore Area with Shallowing, Deepening (> +/- 1ft) 246,047 square meters

Table B-1b. Evaluation of T1T4 Bathymetric Change in Channel (>20' CRD) Areas Based on 1 Square Meter Cell Counts (Dredged Area Data Removed).

	River Mile																
Bathymetric Change	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15.7	Totals	
No Change (# of cells)																	% No Change
+/- 0.25'	239274	233847	254564	498972	424009	189659	224664	474254	470878	144837	144974	116529	130152	126617	180324	3,853,554	41.33%
Shallowing (# of cells)																	% Shallowing (cumulative)
-0.5 - -0.25	14660	52686	153308	94648	98167	14108	12099	112275	134967	64032	36242	18778	9455	6266	50304	871,995	41.45
-1 - -0.5	9241	63382	122953	16754	106167	10359	6344	36793	138337	95081	23488	16313	6528	4124	48484	704,348	74.94
-2 - -1	2685	35293	31834	2131	21491	4194	1780	5461	107371	137689	23836	10617	3376	1339	18327	407,424	94.31
-3 - -2	309	56	238	34	549	1201	337	978	3983	67881	11937	2529	711	324	1371	92,438	98.70
-4 - -3	8	4	156	0	152	516	136	31	343	16670	5086	769	204	88	137	24,300	99.86
-5 - -4	1	1	65	1	85	271	59	7	61	27	873	288	69	29	16	1,853	99.95
-6 - -5	0	1	30	0	57	25	7	2	13	1	114	83	22	15	16	386	99.96
-7 - -6	0	1	33	0	48	0	8	1	4	0	103	55	14	3	12	282	99.98
-8 - -7	0	2	61	0	25	0	3	1	3	0	131	27	4	0	14	271	99.99
-9 - -8	0	2	19	0	10	0	1	0	2	0	17	26	3	0	4	84	99.99
-10 - -9	0	0	1	0	0	0	1	0	4	0	0	13	0	1	6	26	100.00
-30 - -10	0	5	0	0	0	0	1	4	12	0	0	46	0	0	12	80	100.00
-55 - -30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.00
Total cells shallowing	26904	151433	308698	113568	226751	30674	20776	155553	385100	381381	101827	49544	20386	12189	118703	2,103,487	
Deepening (# of cells)																	% Deepening (cumulative)
0.5-0.25	145842	147618	99021	72874	76468	195544	213928	147362	181804	76186	150639	152293	168795	195134	108830	2,132,338	63.33
0.5-1	73854	82727	46888	31749	20790	98773	85662	52477	47359	32702	116352	79182	87331	70419	98884	1,025,149	93.77
1-2	19900	13414	10769	4841	10046	11717	6825	4053	6030	1502	4381	12477	16825	7851	55205	185,836	99.29
2 - 3	2340	969	719	733	2245	213	641	-1875	645	129	104	1523	1584	545	5518	16,033	99.76
3 - 4	-161	180	91	141	623	20	186	-683	104	32	10	264	292	105	384	1,588	99.81
4 - 5	-257	102	83	49	222	2	98	978	36	12	3	343	118	53	233	2,075	99.87
5 - 6	425	118	38	62	69	1	60	589	11	0	1	208	56	28	192	1,858	99.93
6 - 7	278	50	27	49	6	0	33	523	1	0	0	152	34	9	37	1,199	99.96
7 - 8	43	36	18	28	1	0	15	383	4	0	0	125	19	0	10	682	99.98
8 - 9	0	17	15	10	0	0	3	193	2	0	0	70	14	0	9	333	99.99
9 - 10	0	2	9	6	0	0	2	61	2	0	0	6	9	1	5	103	100.00
10-45	1	0	4	7	0	0	1	13	8	0	0	21	32	0	7	94	100.00
Total cells deepening	242265	245233	157682	110549	110470	306270	307454	204074	236006	110563	271490	246664	275109	274145	269314	3,367,288	
TOTAL CELLS	508443	630513	720944	723089	761230	526603	552894	833881	1091984	636781	518291	412737	425647	412951	568341	9,324,329	

Percentages	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15.7	
No change	47%	37%	35%	69%	56%	36%	41%	57%	43%	23%	28%	28%	31%	31%	32%	41%
Shallowing	5%	24%	43%	16%	30%	6%	4%	19%	35%	60%	20%	12%	5%	3%	21%	23%
Deepening	48%	39%	22%	15%	15%	58%	56%	24%	22%	17%	52%	60%	65%	66%	47%	36%

Total Shallowing, Deepening (> +/- 1ft)/Total cells 7.9%
Total Channel Area with Shallowing, Deepening (> +/- 1ft) 736,945 square meters

Table B-2a. Evaluation of T3T4 Bathymetric Change in Nearshore (<20' CRD) Areas Based on 1 Square Meter Cell Counts.

	River Mile																
Bathymetric Change	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15.7	Totals	
No Change (# of cells)																	% No Change
+/- 0.25'	59477	87306	116600	103585	46062	39556	81837	69189	88281	122472	26180	27140	16033	127953	293949	1,305,620	71.16%
																	% Shallowing
Shallowing (# of cells)																	(cumulative)
-0.5 - -0.25	3454	2546	1704	4480	2868	5352	6328	4024	8384	10565	2956	5441	2382	6508	28186	95,178	58.87
-1 - -0.5	2036	1177	1315	2668	1945	2338	3031	2189	6814	2319	1713	1947	1121	4962	12095	47,670	88.36
-2 - -1	776	496	308	898	683	682	886	836	3092	416	312	1062	524	1413	3261	15,645	98.03
-3 - -2	100	52	40	126	122	45	132	177	438	85	28	168	158	230	359	2,260	99.43
-4 - -3	21	17	8	68	30	16	12	54	77	16	9	16	127	54	64	589	99.80
-5 - -4	4	15	7	20	9	2	1	13	20	3	2	8	61	6	27	198	99.92
-6 - -5	0	7	0	2	12	4	3	7	5	0	0	1	12	1	12	66	99.96
-7 - -6	0	7	0	0	5	0	3	3	5	0	0	1	3	2	2	31	99.98
-8 - -7	0	3	0	0	4	0	0	1	0	0	0	0	0	0	0	8	99.98
-9 - -8	0	1	0	0	4	0	0	2	0	0	0	0	1	0	0	8	99.99
-10 - -9	0	2	0	0	2	0	0	0	0	0	0	0	2	0	0	6	99.99
-30 - -10	0	0	0	3	7	0	0	1	0	0	0	0	0	0	0	11	100.00
-55 - -30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.00
Total cells shallowing	6391	4323	3382	8265	5691	8439	10396	7307	18835	13404	5020	8644	4391	13176	44006	161,670	
																	% Deepening
Deepening (# of cells)																	(cumulative)
0.5-0.25	14154	10000	22530	28033	17041	7778	10839	14277	19794	25948	7279	6286	3791	19067	34871	241,688	65.77
0.5-1	9183	2778	5721	7623	9410	3437	3769	5943	6927	10952	3139	3992	2291	5611	12730	93,506	91.21
1-2	1505	744	973	2142	2006	1029	865	2378	2147	2349	756	1715	1439	2130	3309	25,487	98.15
2 - 3	133	76	135	610	292	105	128	459	576	237	126	262	131	342	385	3,997	99.24
3 - 4	126	8	20	318	60	42	49	35	175	39	36	61	15	73	54	1,111	99.54
4 - 5	70	0	21	168	33	25	25	4	50	5	15	21	5	17	13	472	99.67
5 - 6	12	0	21	98	32	27	11	2	24	2	4	9	0	3	5	250	99.74
6 - 7	0	0	10	75	42	15	7	2	21	1	3	5	0	1	3	185	99.79
7 - 8	0	0	4	92	19	10	15	0	12	1	2	0	0	0	2	157	99.83
8 - 9	0	0	6	59	19	8	11	0	10	0	0	3	0	0	1	117	99.86
9 - 10	0	0	11	63	12	4	0	0	9	0	1	1	0	0	0	101	99.89
10-45	0	0	9	119	245	7	0	0	15	11	4	0	0	0	0	410	100.00
Total cells deepening	25183	13606	29461	39400	29211	12487	15719	23100	29760	39545	11365	12355	7672	27244	51373	367,481	
TOTAL CELLS	91051	105235	149443	151250	80964	60482	107952	99596	136876	175421	42565	48139	28096	168373	389328	1,834,771	

Percentages	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15.7	
No change	65%	83%	78%	68%	57%	65%	76%	69%	64%	70%	62%	56%	57%	76%	76%	71%
Shallowing	7%	4%	2%	5%	7%	14%	10%	7%	14%	8%	12%	18%	16%	8%	11%	9%
Deepening	28%	13%	20%	26%	36%	21%	15%	23%	22%	23%	27%	26%	27%	16%	13%	20%

Total Shallowing, Deepening (> +/- 1ft)/Total cells 2.8%
Total Nearshore Area with Shallowing, Deepening (> +/- 1ft) 51,109 square meters

Table B-2b. Evaluation of T3T4 Bathymetric Change in Channel (>20' CRD) Areas Based on 1 Square Meter Cell Counts.

	River Mile																
Bathymetric Change	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15.7	Totals	
No Change (# of cells)																	% No Change
+/- 0.25'	400161	548101	646218	664106	653094	423416	473976	736433	773123	312259	406293	331303	348742	352147	477394	7,546,766	80.18%
Shallowing (# of cells)																	% Shallowing (cumulative)
-0.5 - -0.25	4716	42021	50430	5783	50791	16295	4296	57962	169771	120656	30806	16839	7780	2176	30266	610,588	62.23
-1 - -0.5	1209	2211	793	1327	2615	6543	935	5918	72166	174807	30377	11184	3549	721	5950	320,305	94.88
-2 - -1	618	537	113	253	418	1831	281	681	2132	22178	9671	5178	1199	138	602	45,830	99.55
-3 - -2	166	81	48	39	117	163	49	125	93	20	271	1944	305	61	66	3,548	99.91
-4 - -3	0	0	10	7	29	42	19	35	11	3	0	267	126	25	18	592	99.97
-5 - -4	0	0	0	1	9	4	7	14	6	1	0	60	24	13	7	146	99.99
-6 - -5	0	0	0	0	2	1	6	6	3	0	0	23	9	10	6	66	99.99
-7 - -6	0	0	0	0	2	0	2	4	3	0	0	3	2	2	3	21	100.00
-8 - -7	0	0	1	0	1	0	0	1	3	0	0	7	1	1	1	16	100.00
-9 - -8	0	0	0	0	2	0	0	0	2	0	0	4	0	0	2	10	100.00
-10 - -9	0	0	0	0	0	0	1	0	4	0	0	3	0	0	0	8	100.00
-30 - -10	0	0	0	0	0	0	1	0	9	0	0	3	0	0	1	14	100.00
-55 - -30	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	100.00
Total cells shallowing	6709	44850	51395	7410	53986	24879	5597	64746	244203	317665	71125	35515	12995	3147	36922	981,144	
Deepening (# of cells)																	% Deepening (cumulative)
0.5-0.25	88101	40840	29241	48591	49579	63242	66505	50232	40365	9368	37431	35069	67671	51857	51742	729,834	82.53
0.5-1	15211	5474	2299	4161	10204	15807	5047	12635	11973	1376	1866	9454	13207	4905	8944	122,563	96.39
1-2	2388	1053	98	693	3000	3726	706	1918	1760	217	264	5849	2479	1116	1257	26,524	99.39
2 - 3	215	58	13	89	177	28	185	82	345	73	3	1607	147	193	152	3,367	99.77
3 - 4	80	4	1	48	37	11	84	18	147	21	2	124	49	83	48	757	99.85
4 - 5	56	0	0	26	32	8	68	10	73	7	0	26	30	39	26	401	99.90
5 - 6	36	0	0	28	23	1	48	5	38	3	0	13	12	19	14	240	99.93
6 - 7	23	0	0	15	21	0	37	6	20	2	0	8	2	5	18	157	99.94
7 - 8	18	0	0	7	32	0	33	4	4	0	0	4	1	5	8	116	99.96
8 - 9	4	0	0	0	36	0	15	0	1	0	0	5	0	1	2	64	99.96
9 - 10	0	0	0	1	24	0	14	0	1	0	0	3	0	0	4	47	99.97
10-45	0	0	0	1	204	0	14	0	0	0	0	2	0	42	3	266	100.00
Total cells deepening	106132	47429	31652	53660	63369	82823	72756	64910	54727	11067	39566	52164	83598	58265	62218	884,336	
TOTAL CELLS	513002	640380	729265	725176	770449	531118	552329	866089	1072053	640991	516984	418982	445335	413559	576534	9,412,246	

Percentages	0-1	1-2	2-3	3-4	4-5	5-6	6-7	7-8	8-9	9-10	10-11	11-12	12-13	13-14	14-15.7	
No change	78%	86%	89%	92%	85%	80%	86%	85%	72%	49%	79%	79%	78%	85%	83%	80%
Shallowing	1%	7%	7%	1%	7%	5%	1%	7%	23%	50%	14%	8%	3%	1%	6%	10%
Deepening	21%	7%	4%	7%	8%	16%	13%	7%	5%	2%	8%	12%	19%	14%	11%	9%

Total Shallowing, Deepening (> +/- 1ft)/Total cells 0.9%
Total Channel Area with Shallowing, Deepening (> +/- 1ft) 82,190 square meters

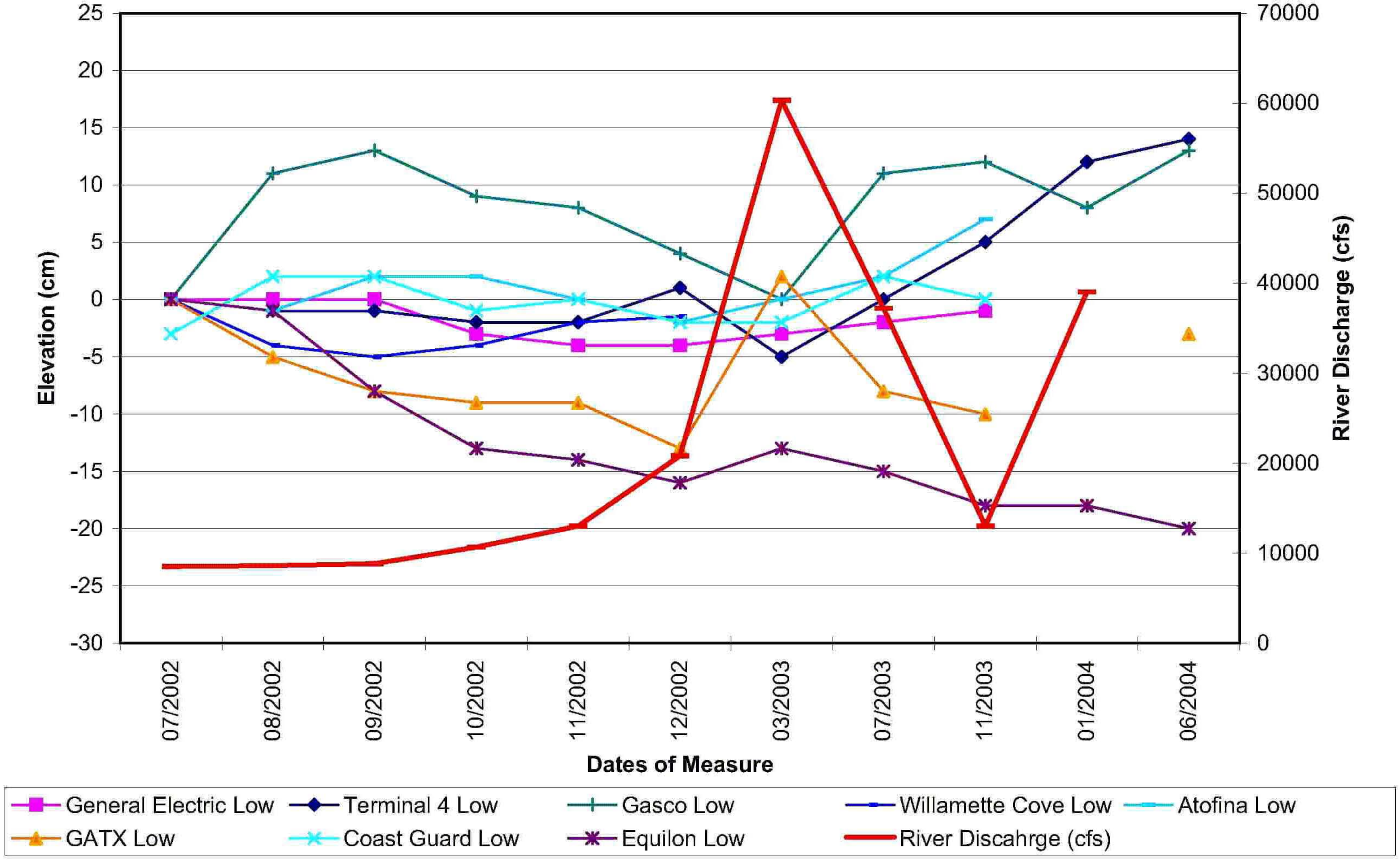


Figure 4-1
Portland Harbor RI/FS
Round 1 Report
Sediment Stakes Measurment
Low Stakes

ANC03448
BZTO104(e)003448

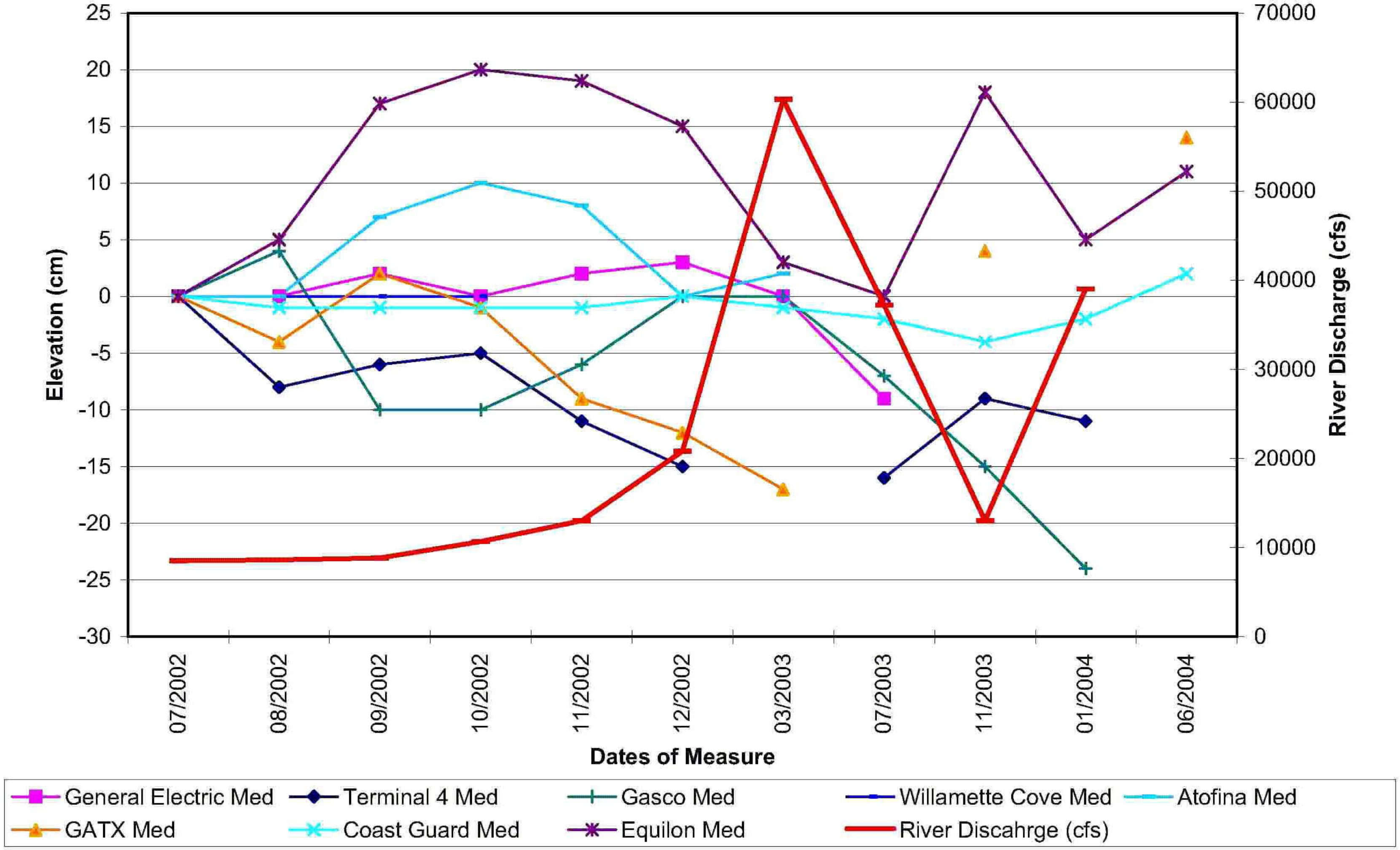


Figure 4-2
Portland Harbor RI/FS
Round 1 Report
Sediment Stakes Measurment
Medium Stakes

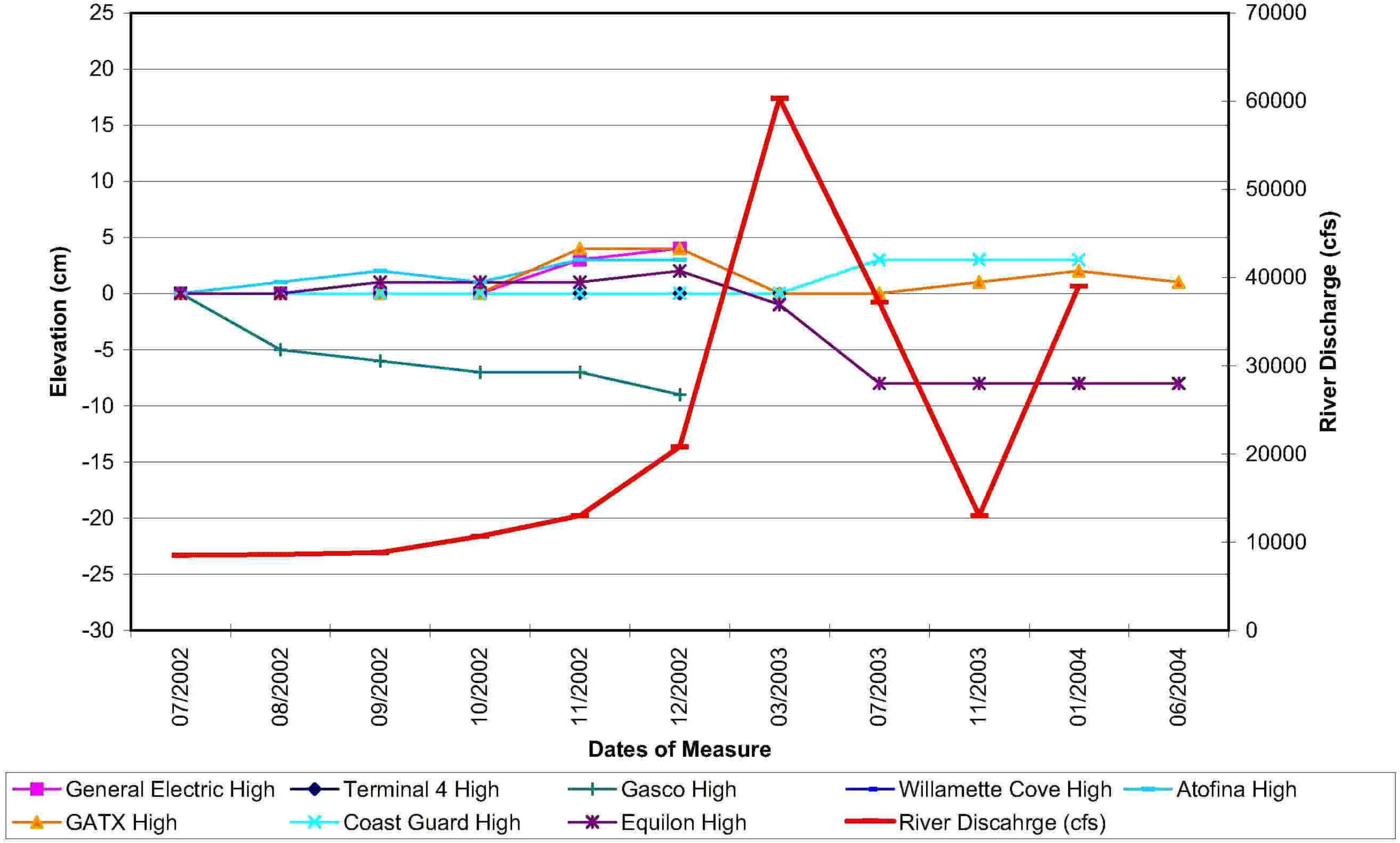
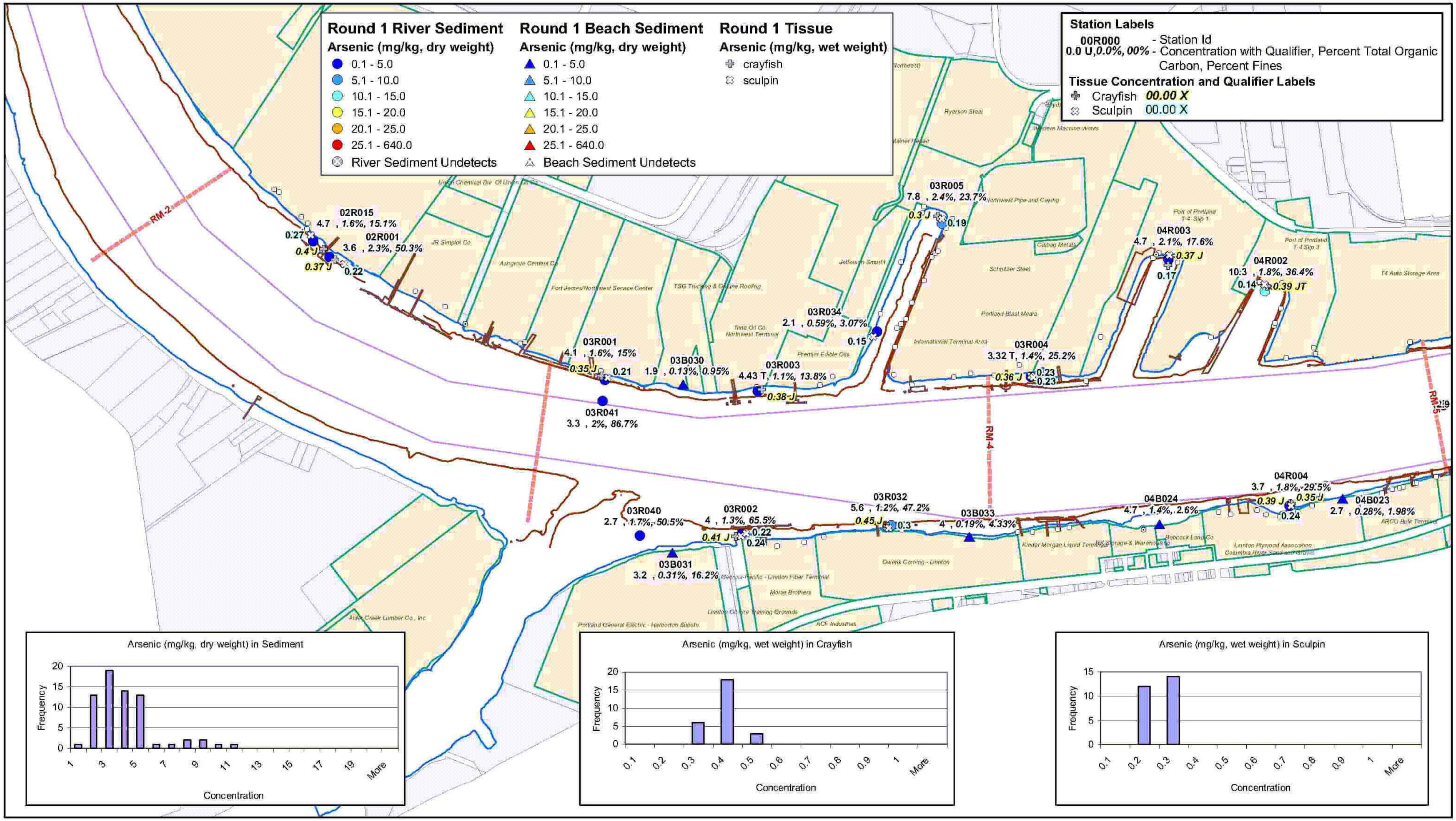


Figure 4-3
Portland Harbor RI/FS
Round 1 Report
Sediment Stakes Measurment
High Stakes

BZTO104(e)003450
ANC03450



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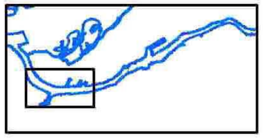

FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS
Channel & River miles: Developed from US Army Corps of Engineers information.
Bathymetric Information: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. (DEA) Dec, 2001/Jan, 2002 and July/Sept 2002.
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Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report Arsenic.mxd)
Plot Date: 10/05/2004

Legend

- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks and Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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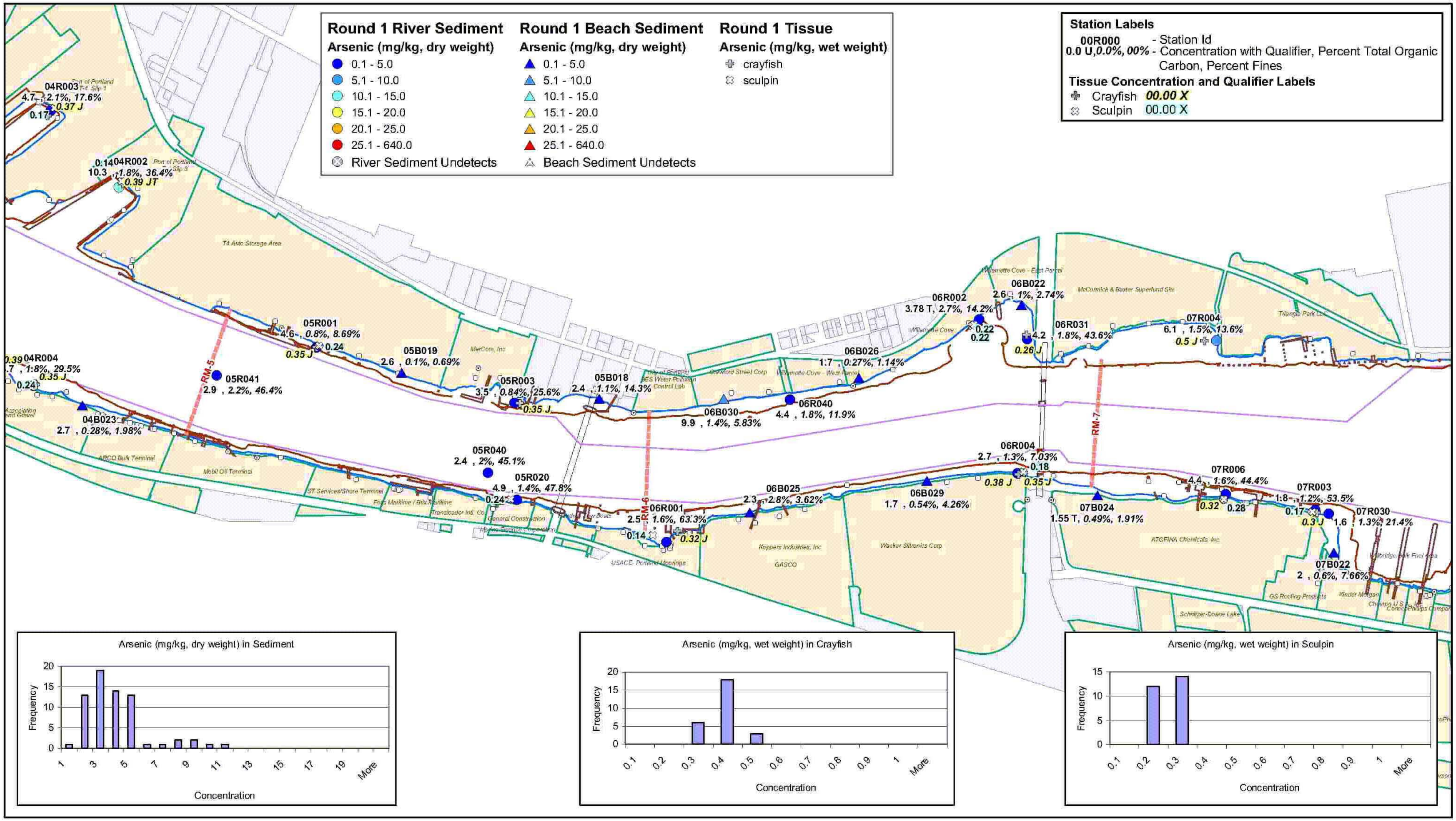
Figure 4-4a
Portland Harbor RI/FS
Round 1 Report
Arsenic Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003451
ANC03451



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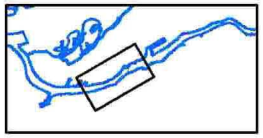

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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report Arsenic.mxd)
Plot Date: 10/05/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks and Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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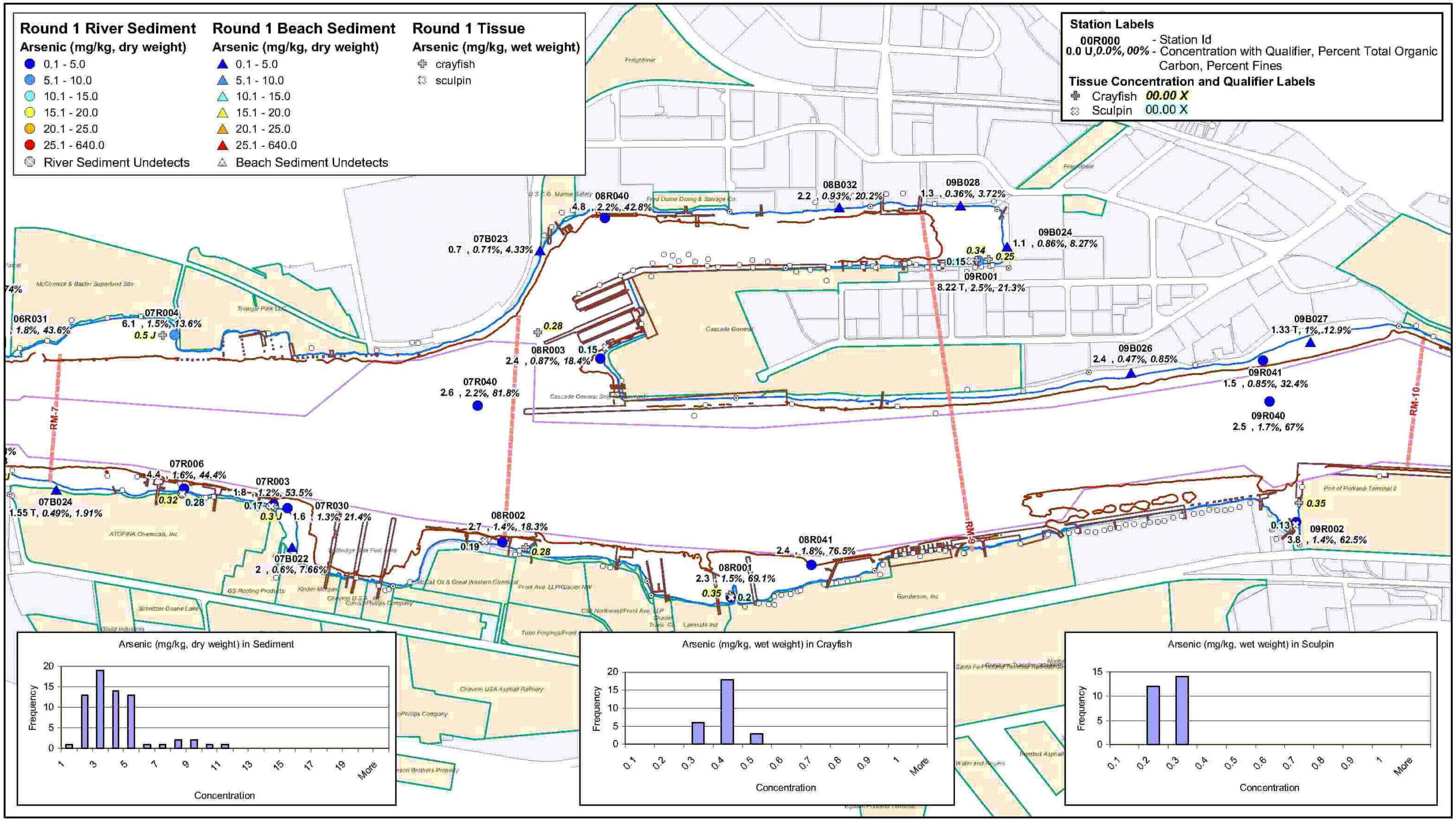
Figure 4-4b
Portland Harbor RI/FS
Round 1 Report
Arsenic Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003452
ANC03452



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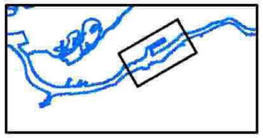

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Plot Date: 10/05/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks and Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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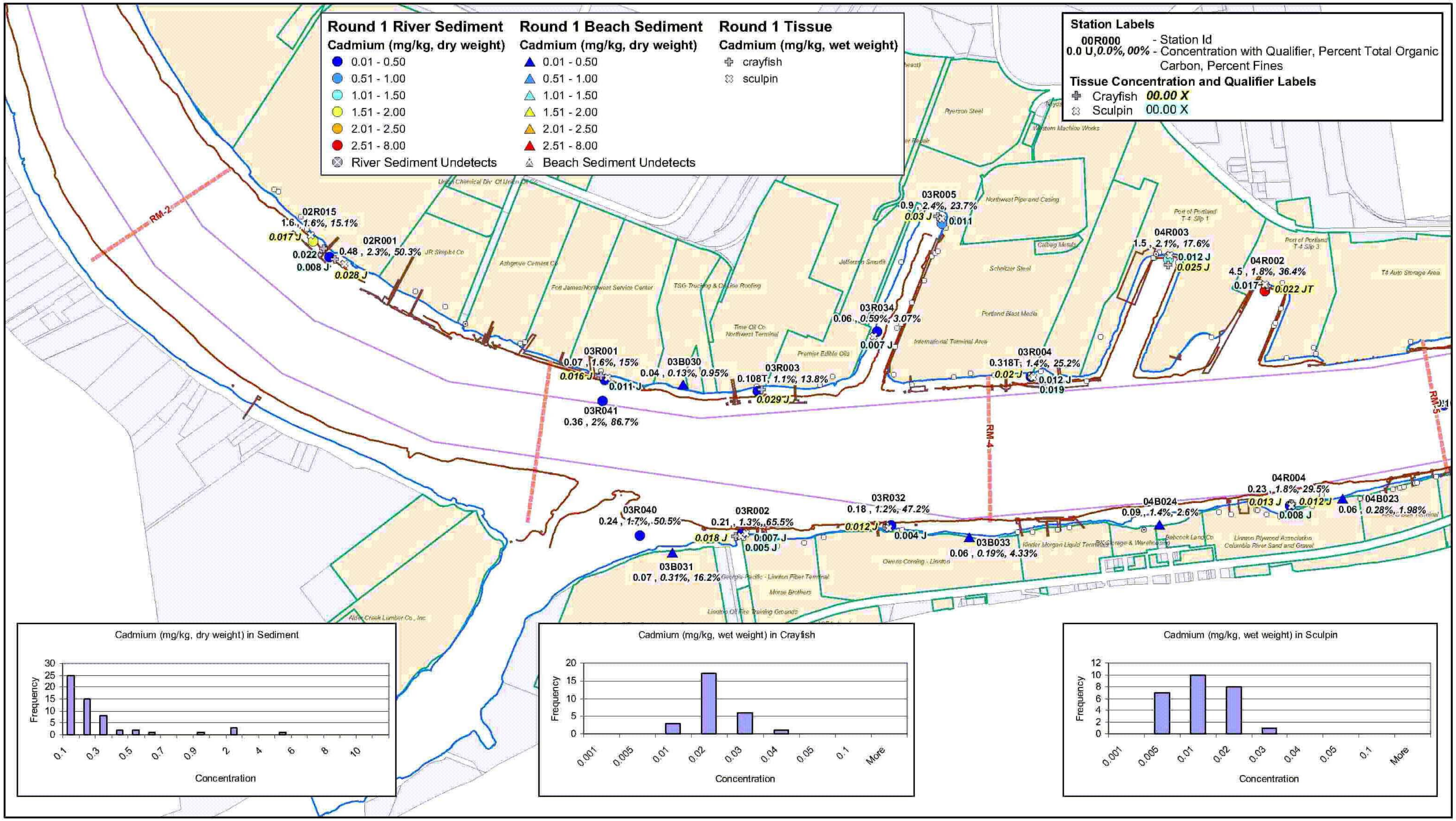
Figure 4-4c
Portland Harbor RI/FS
Round 1 Report
Arsenic Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003453
ANC03453



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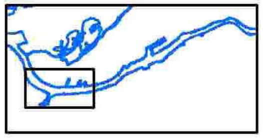

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Transportation, Water, Property, Zoning or Boundaries: Metro RLIS .
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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report Arsenic.mxd)
Plot Date: 09/30/2004

Legend

- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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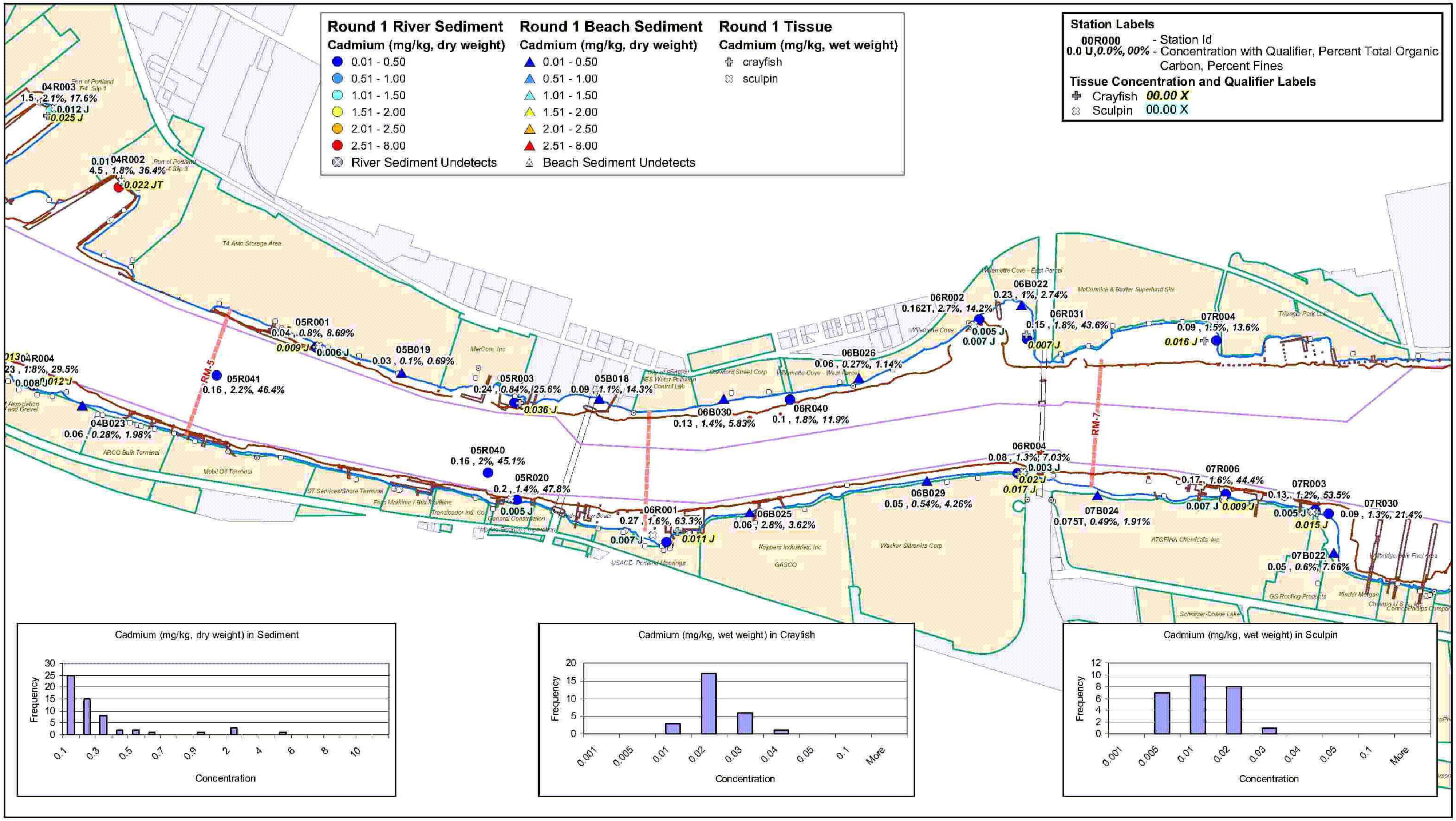
Figure 4-5a
Portland Harbor RI/FS
Round 1 Report
Cadmium Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003454
ANC03454



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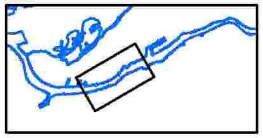

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Transportation, Water, Property, Zoning or Boundaries: Metro RLIS.
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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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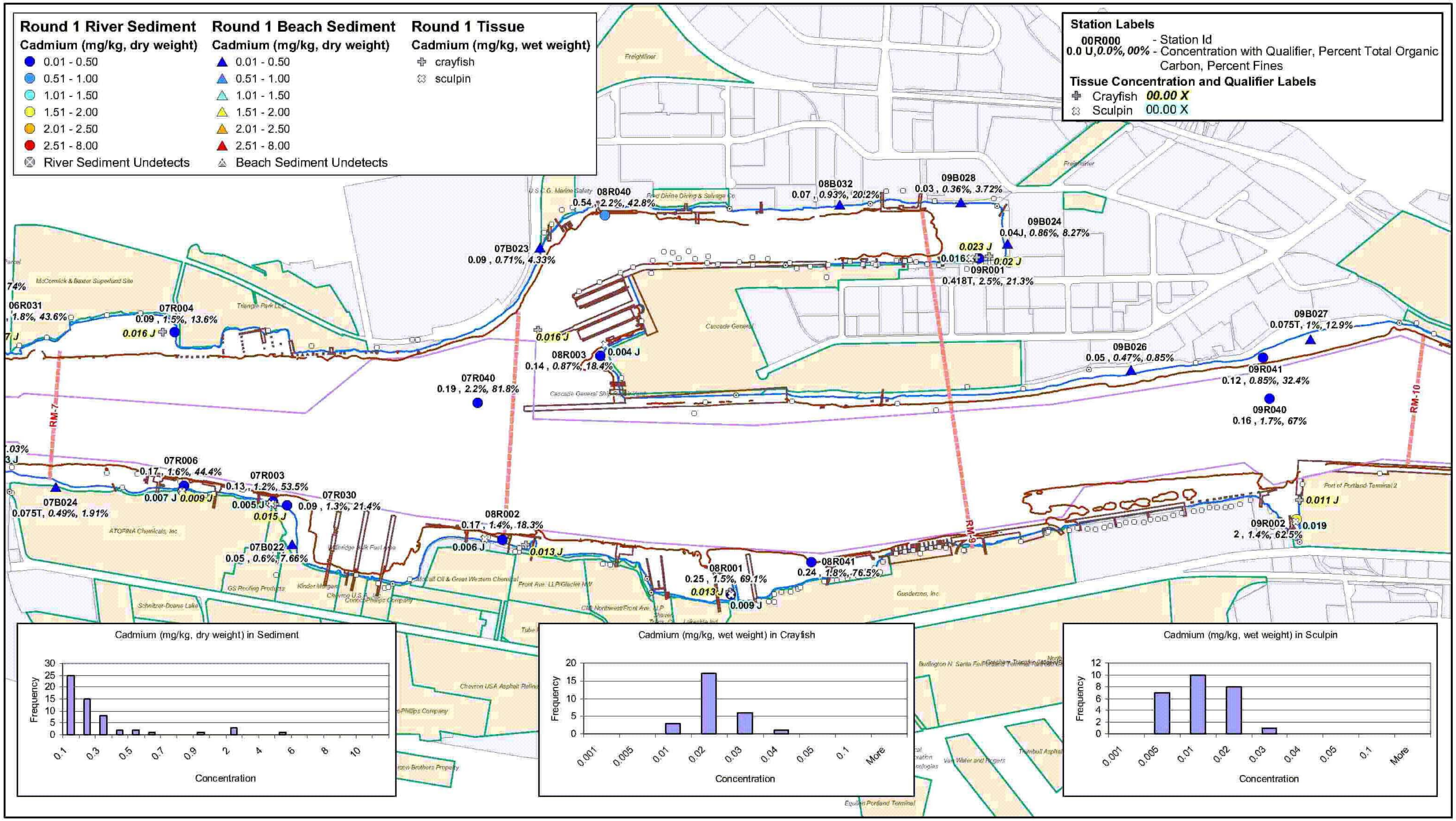
Figure 4-5b
Portland Harbor RI/FS
Round 1 Report
Cadmium Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003455
ANC03455



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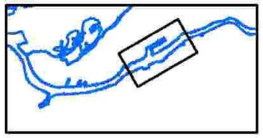

FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS .
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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report Arsenic.mxd)
Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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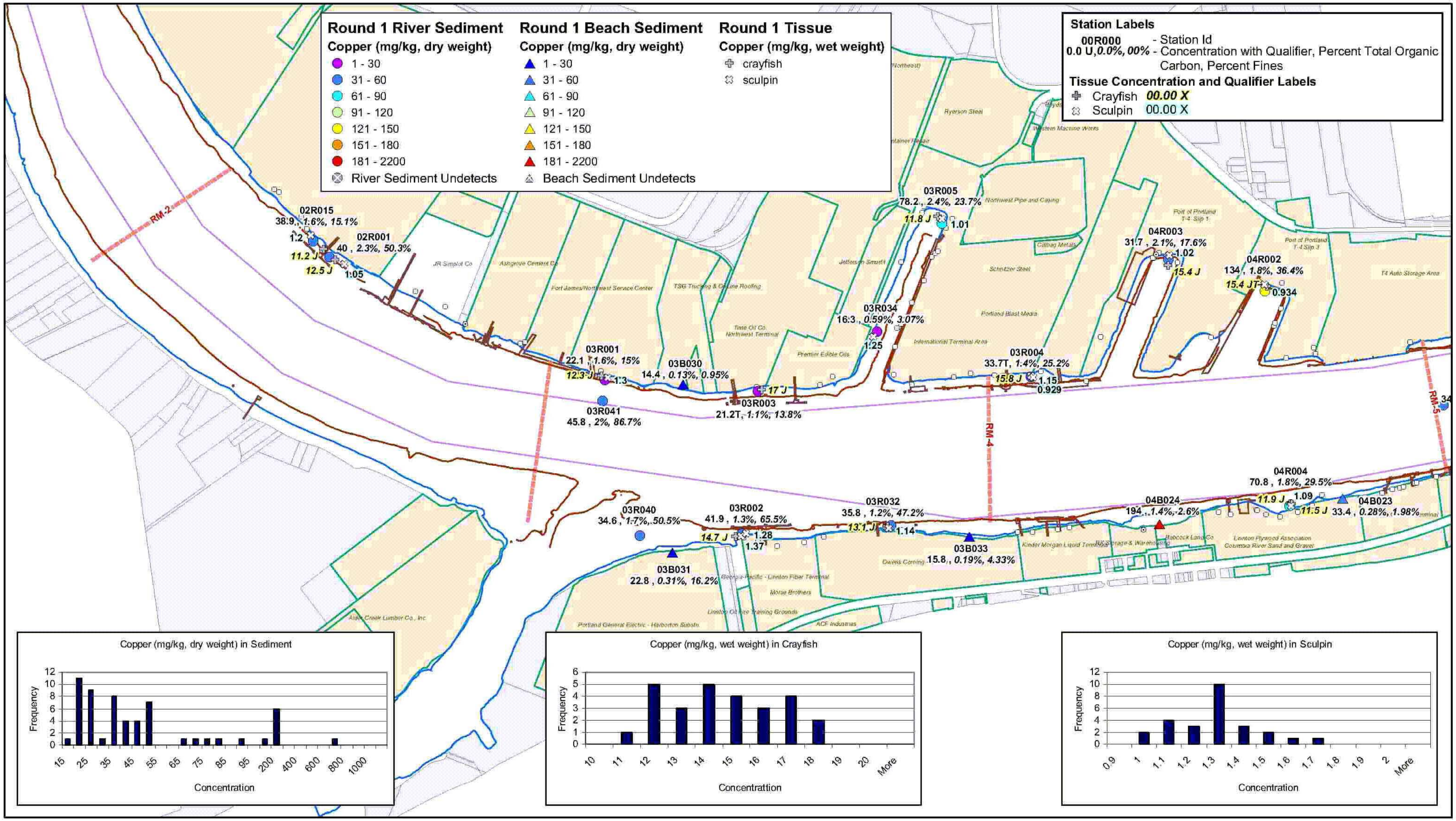
Figure 4-5c
Portland Harbor RI/FS
Round 1 Report
Cadmium Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003456
ANC03456



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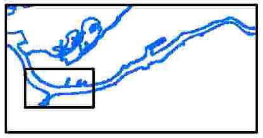

FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS.
Channel & Rivermiles: Developed from US Army Corps of Engineers information.
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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report Copper.mxd)
Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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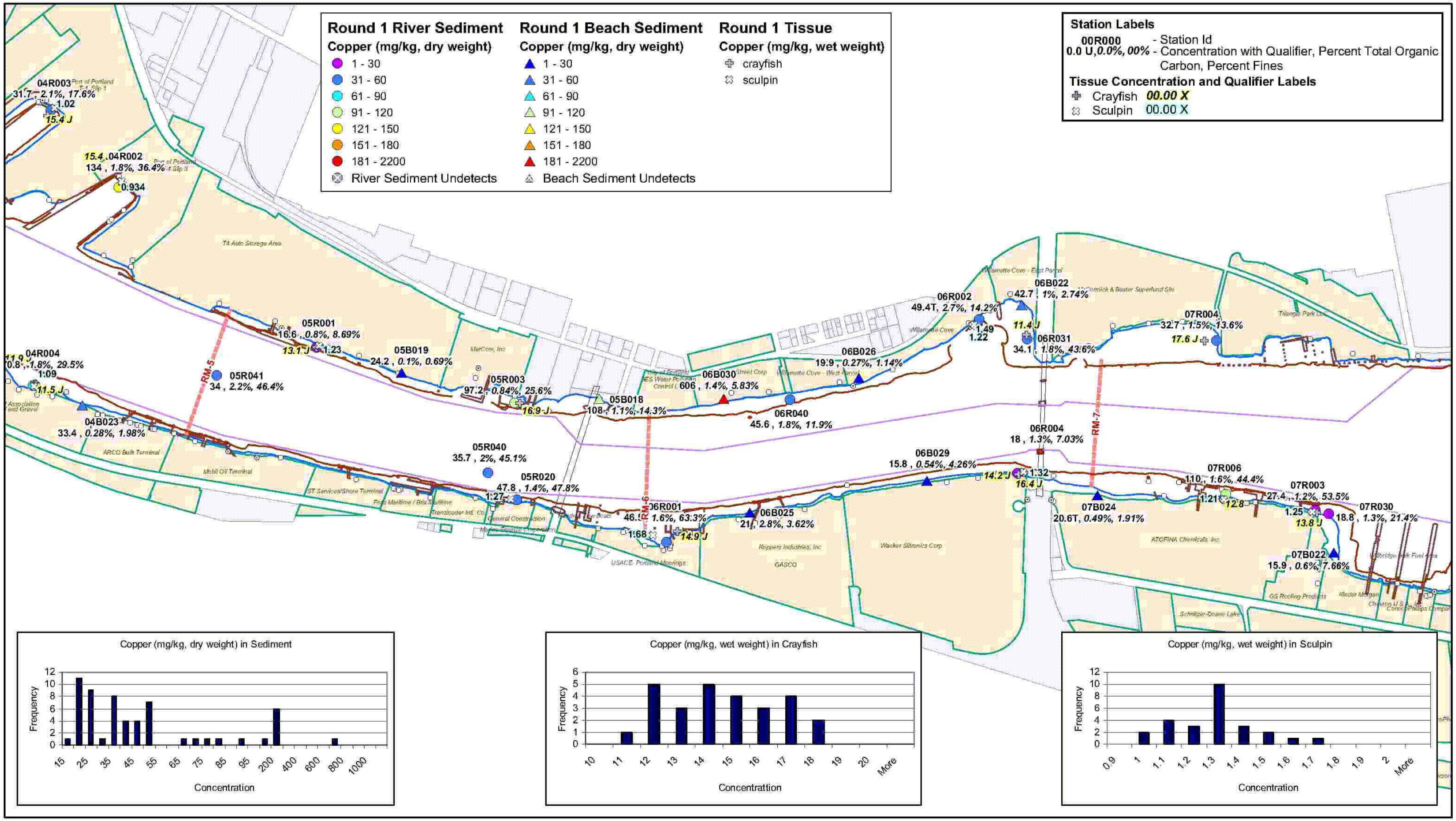
Figure 4-6a
Portland Harbor RI/FS
Round 1 Report
Copper Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003457
ANC03457



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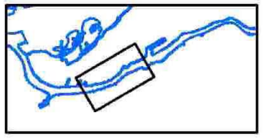

FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS
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Plot Date: 09/30/2004

Legend
City of Portland Outfall
Abandoned City of Portland Outfalls
Private Outfalls
River Mile
- 15 ft. Bathy Contour(-20 CRD)
Bridges
Docks & Structures
River Edge
Select Upland Properties
Navigation Channel

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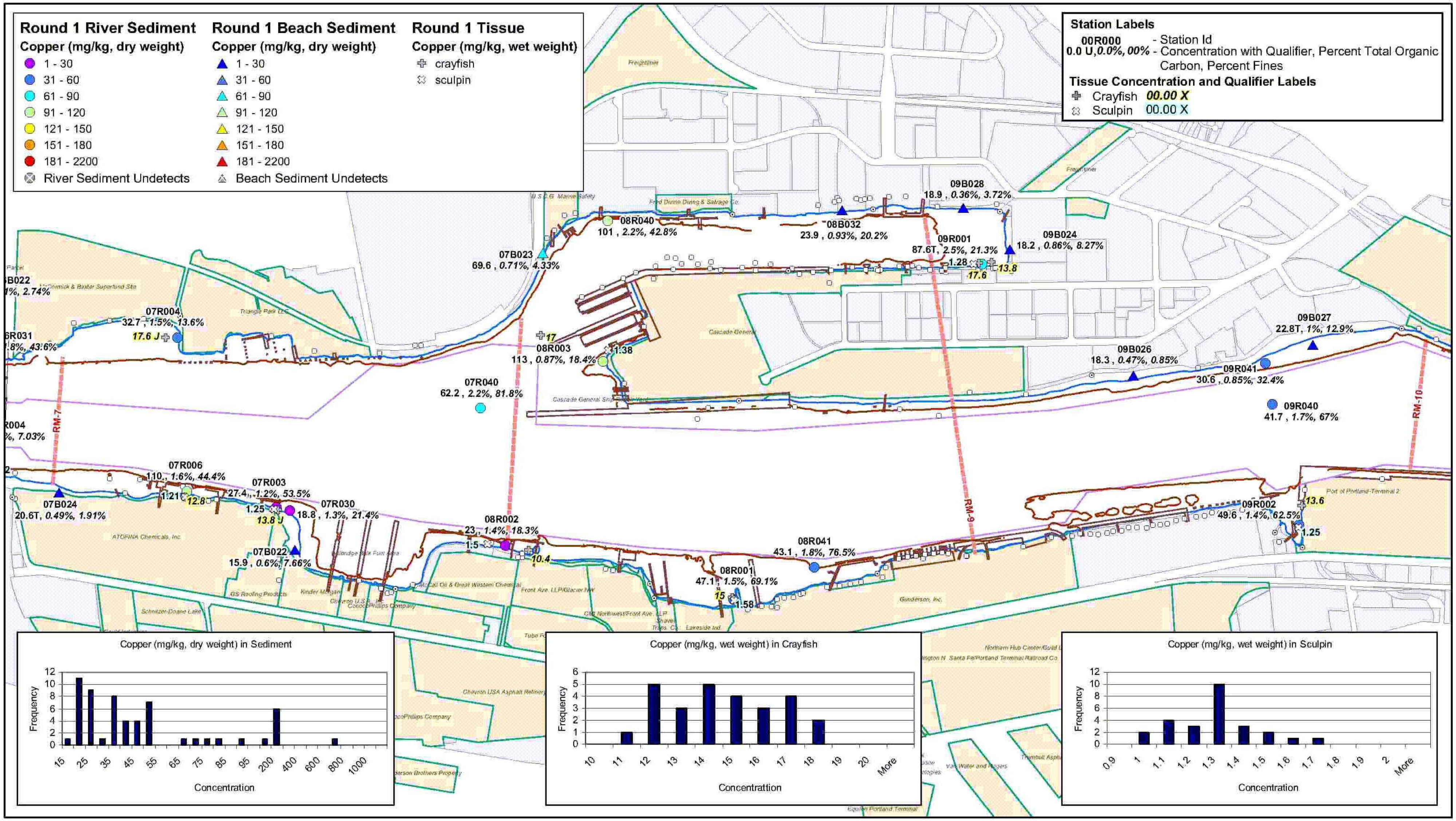
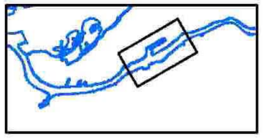
Figure 4-6b
Portland Harbor RI/FS
Round 1 Report
Copper Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003458
ANC03458





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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
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- River Mile
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- Navigation Channel

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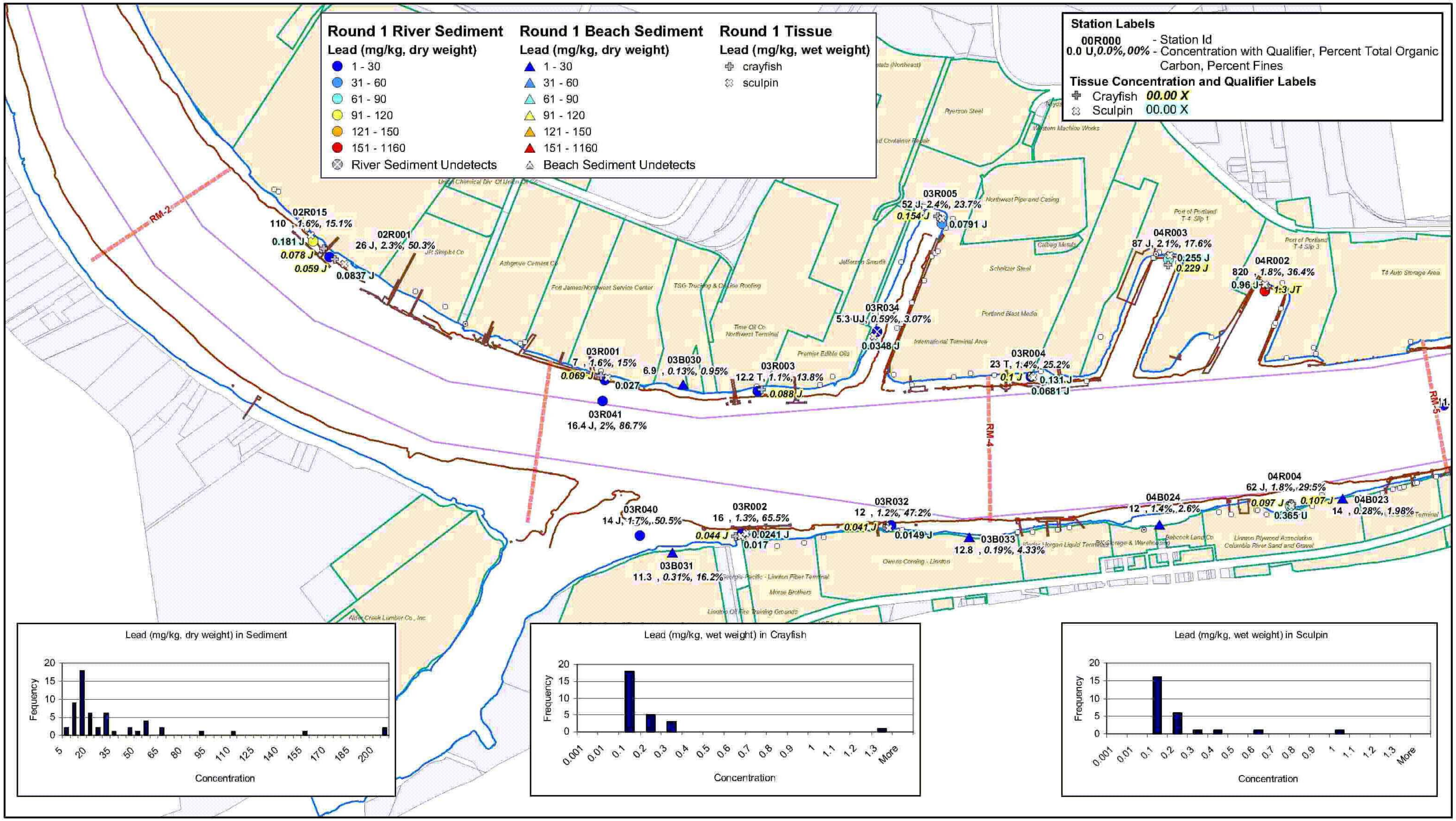
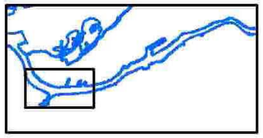
Figure 4-6c
Portland Harbor RI/FS
Round 1 Report
Copper Concentrations in Surface Sediment, Sculpin, and Crayfish





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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report Lead.mxd)
Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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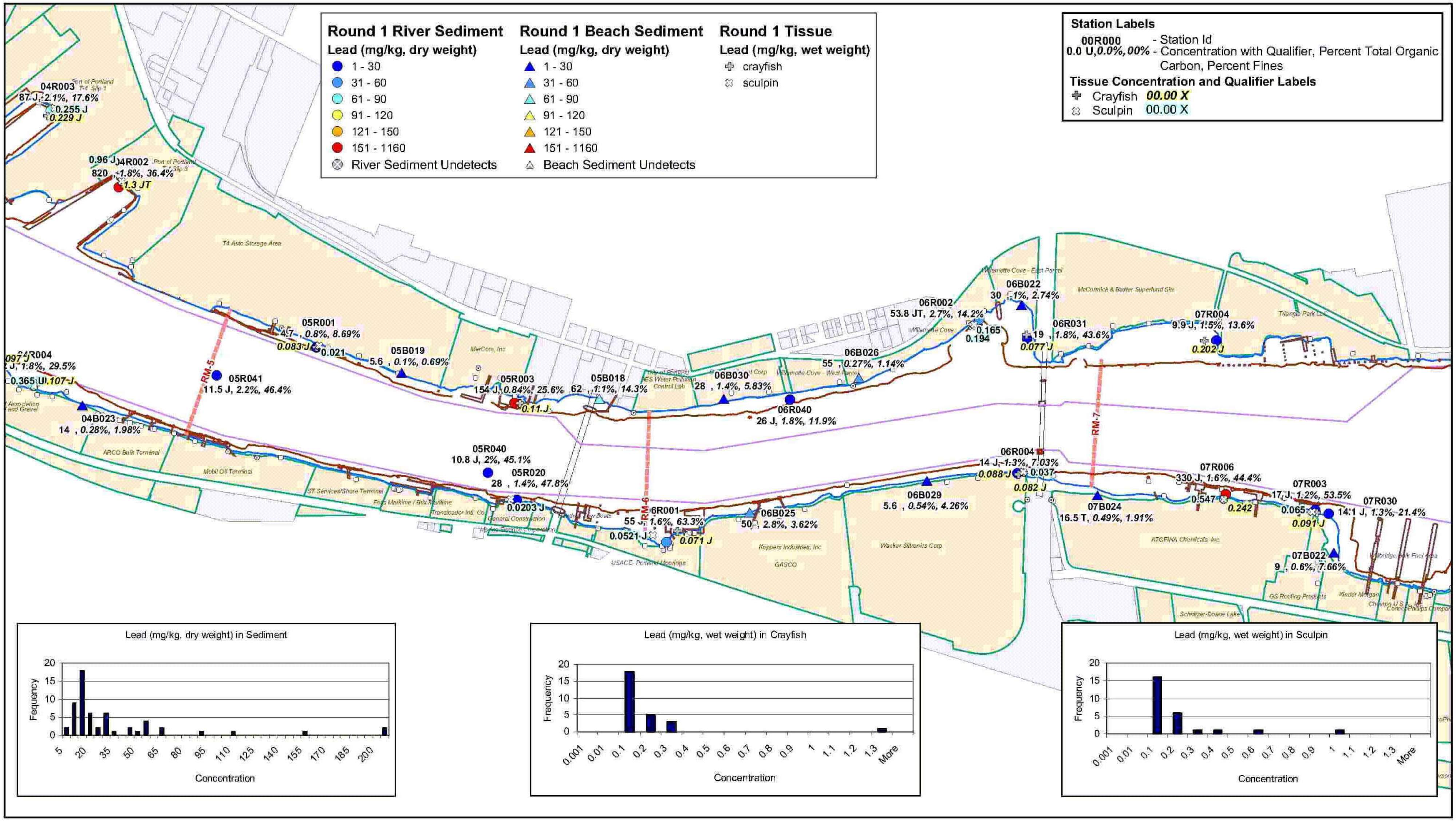
Figure 4-7a
Portland Harbor RI/FS
Round 1 Report
Lead Concentrations in Surface Sediment, Sculpin, and Crayfish

ANC03460
BZTO104(e)003460



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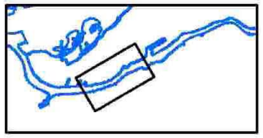

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Docks & In-water Structures: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report Lead.mxd)
Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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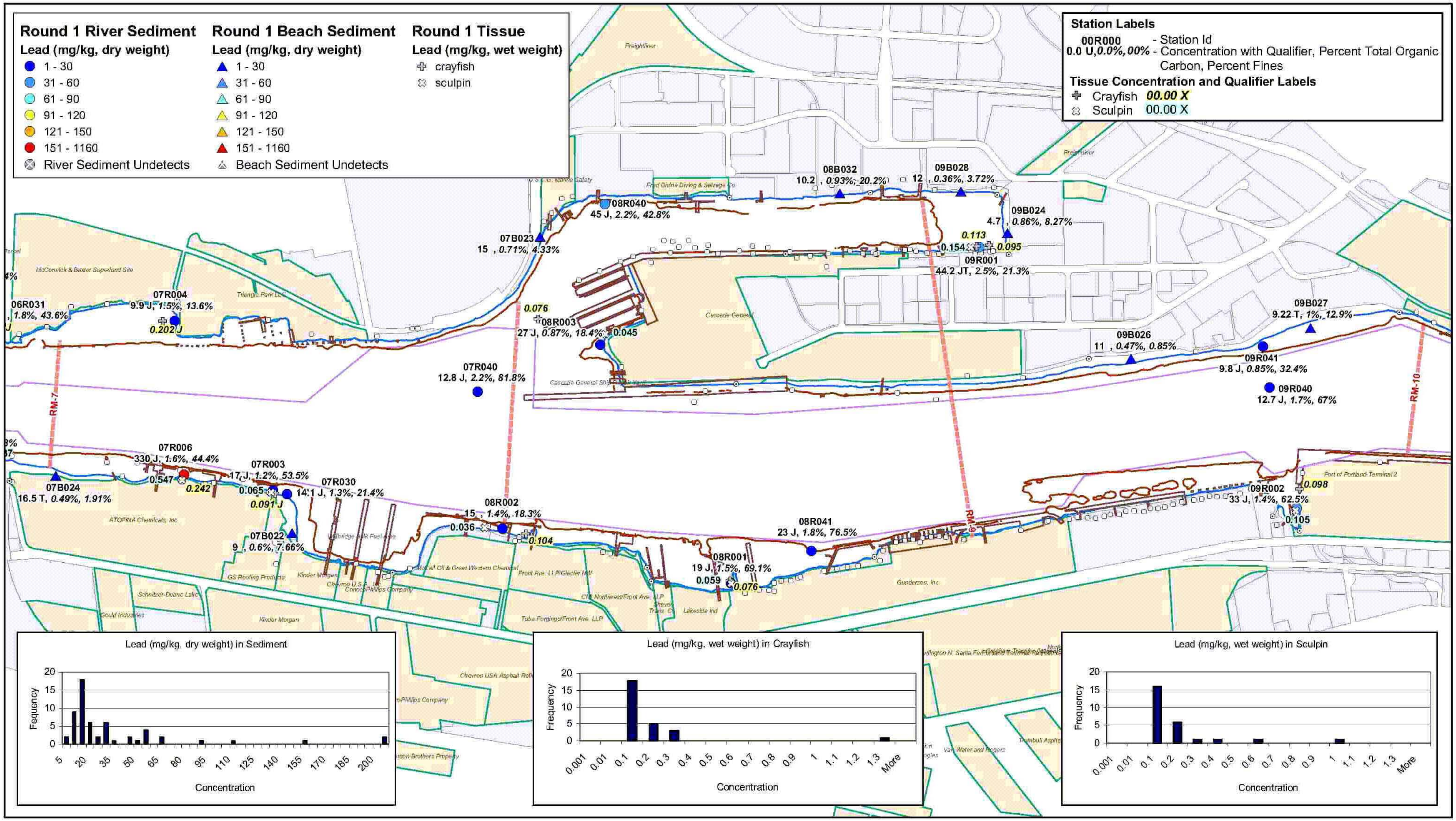
Figure 4-7b
Portland Harbor RI/FS
Round 1 Report
Lead Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003461
ANC03461



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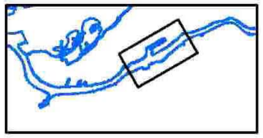

FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS .
Channel & Rivermiles: Developed from US Army Corps of Engineers information.
Bathymetric Information: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. (DEA) Dec, 2001/Jan, 2002 and July/Sept 2002.
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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report Lead.mxd)
Plot Date: 09/30/2004

Legend
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- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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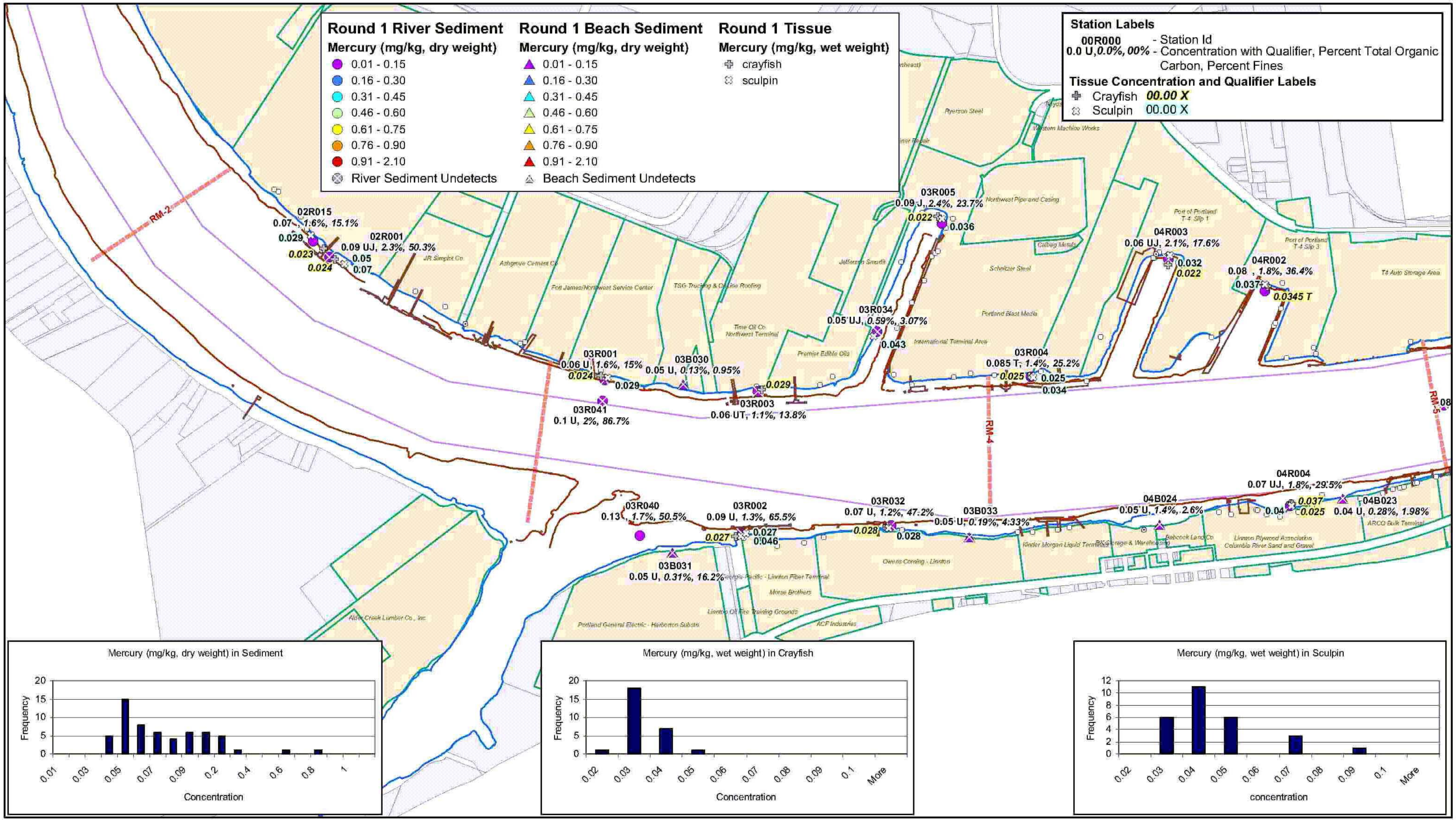
Figure 4-7c
Portland Harbor RI/FS
Round 1 Report
Lead Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003462
ANC03462



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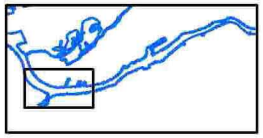

FEATURE SOURCES:
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Channel & River miles: Developed from US Army Corps of Engineers information.
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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report Mercury.mxd)
Plot Date: 09/30/2004

Legend

- City of Portland Outfall
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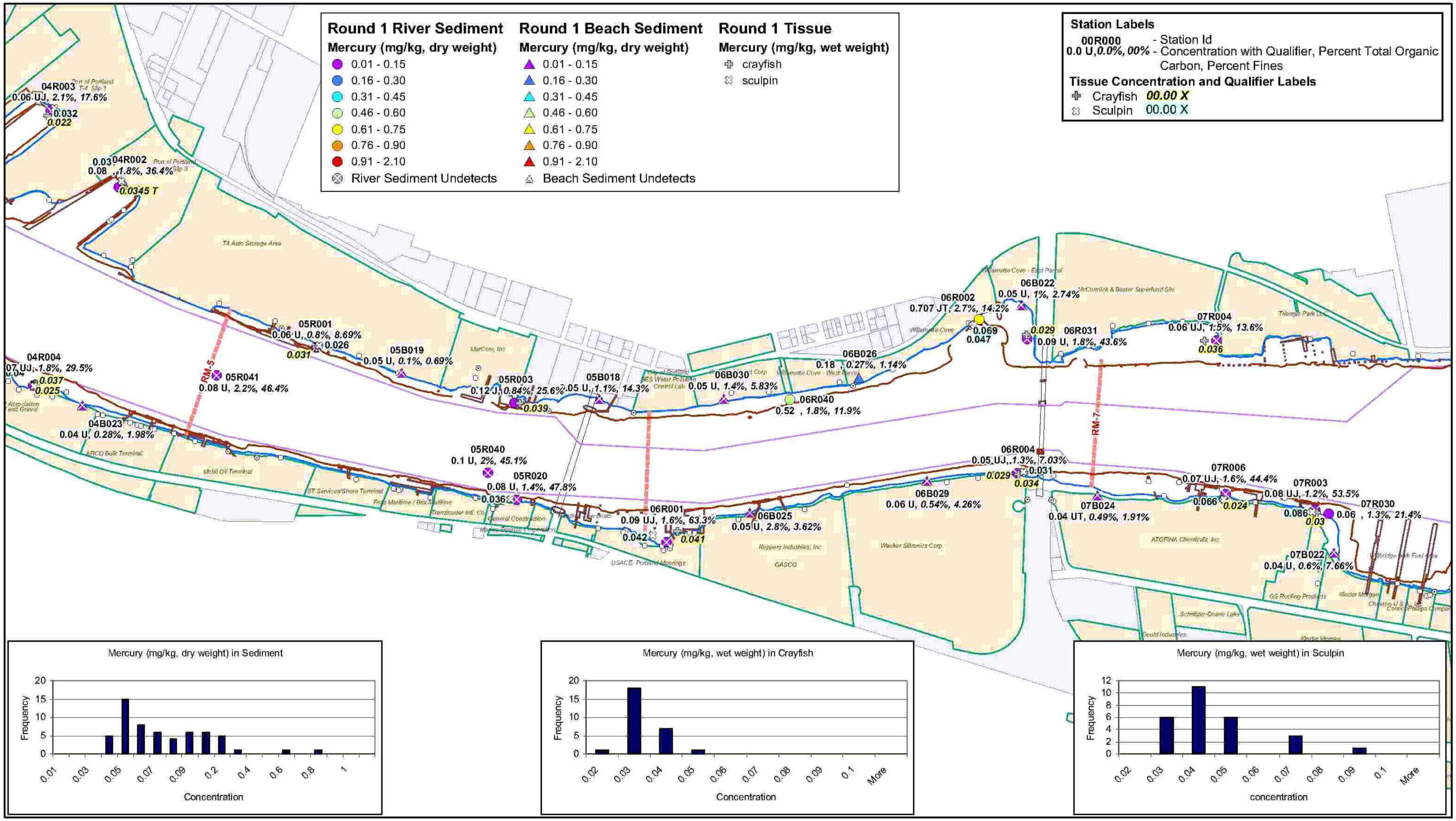
Figure 4-8a
Portland Harbor RI/FS
Round 1 Report
Mercury Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003463
ANC03463



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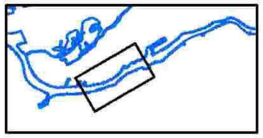

FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS.
Channel & Rivermiles: Developed from US Army Corps of Engineers information.
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Plot Date: 09/30/2004

Legend

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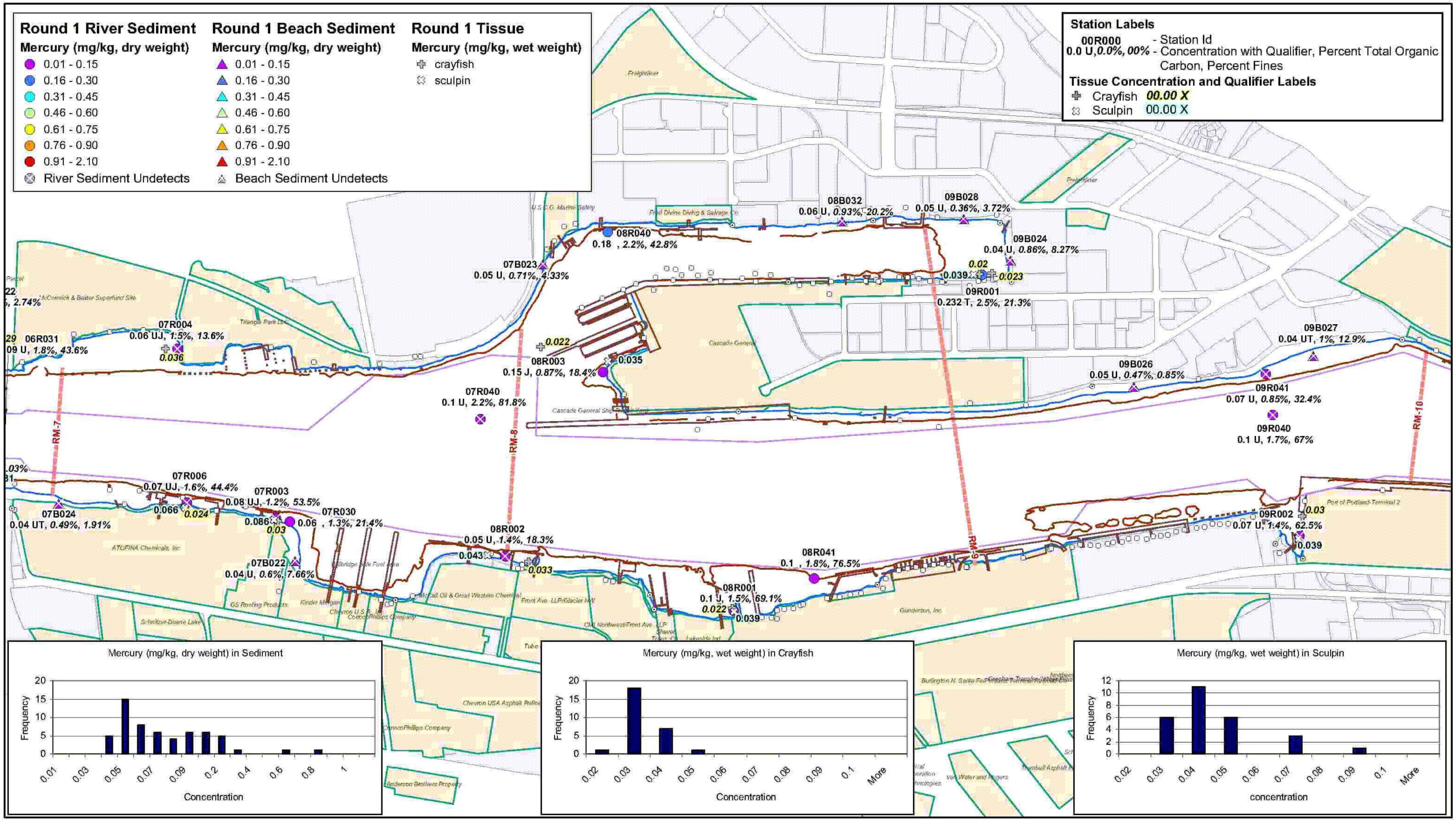
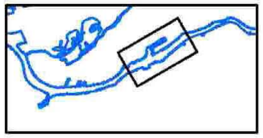
Figure 4-8b
Portland Harbor RI/FS
Round 1 Report
Mercury Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003464
ANC03464





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FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS.
Channel & Rivermiles: Developed from US Army Corps of Engineers information.
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Plot Date: 09/30/2004

Legend
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- Navigation Channel

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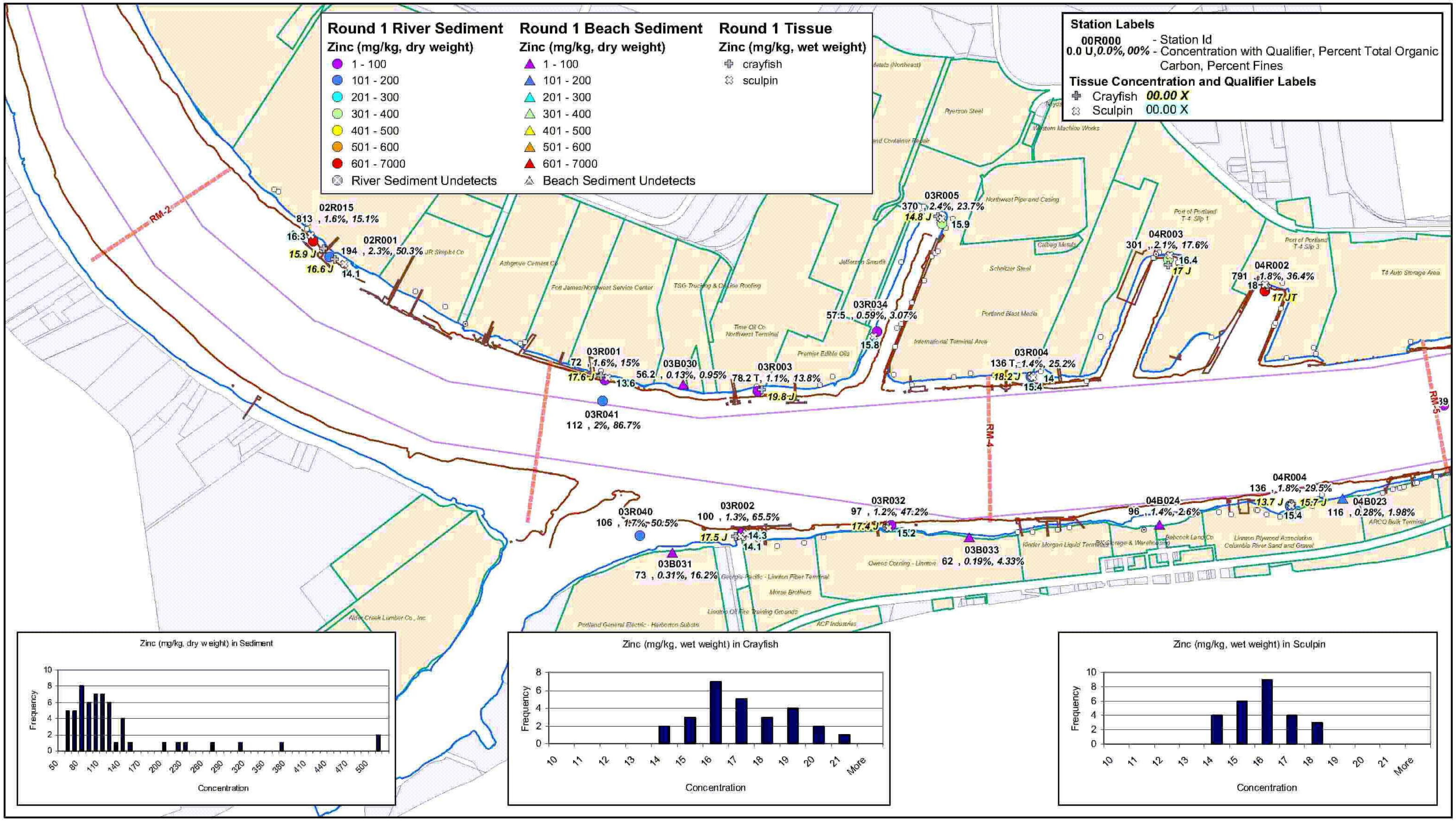
Figure 4-8c
Portland Harbor RI/FS
Round 1 Report
Mercury Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003465
ANC03465



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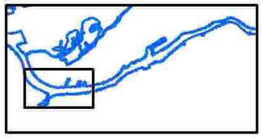

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Plot Date: 09/30/2004

Legend
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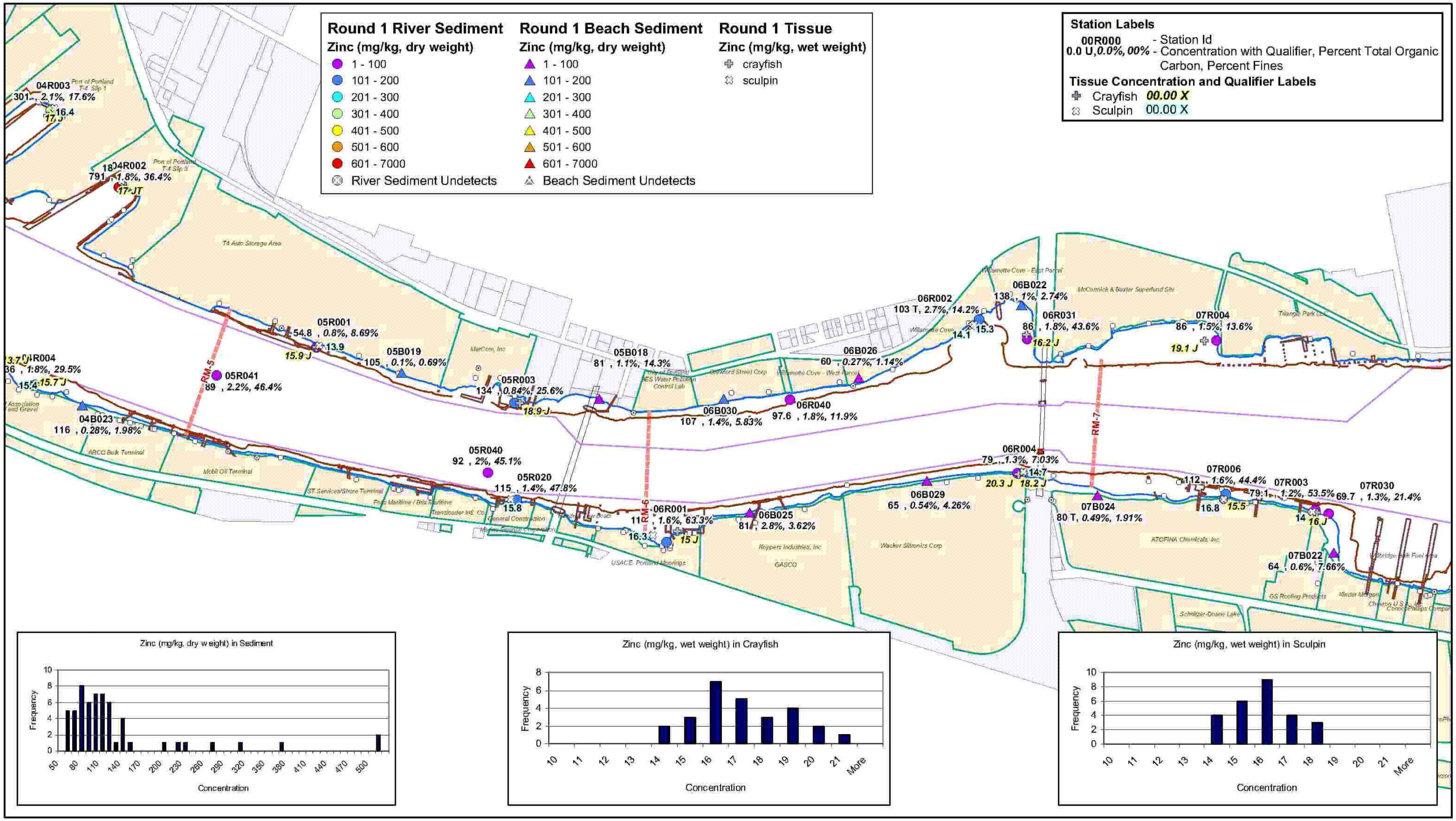
Figure 4-9a
Portland Harbor RI/FS
Round 1 Report
Zinc Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003466
ANC03466



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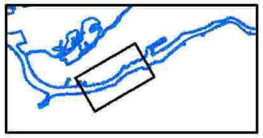

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Legend
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- Navigation Channel

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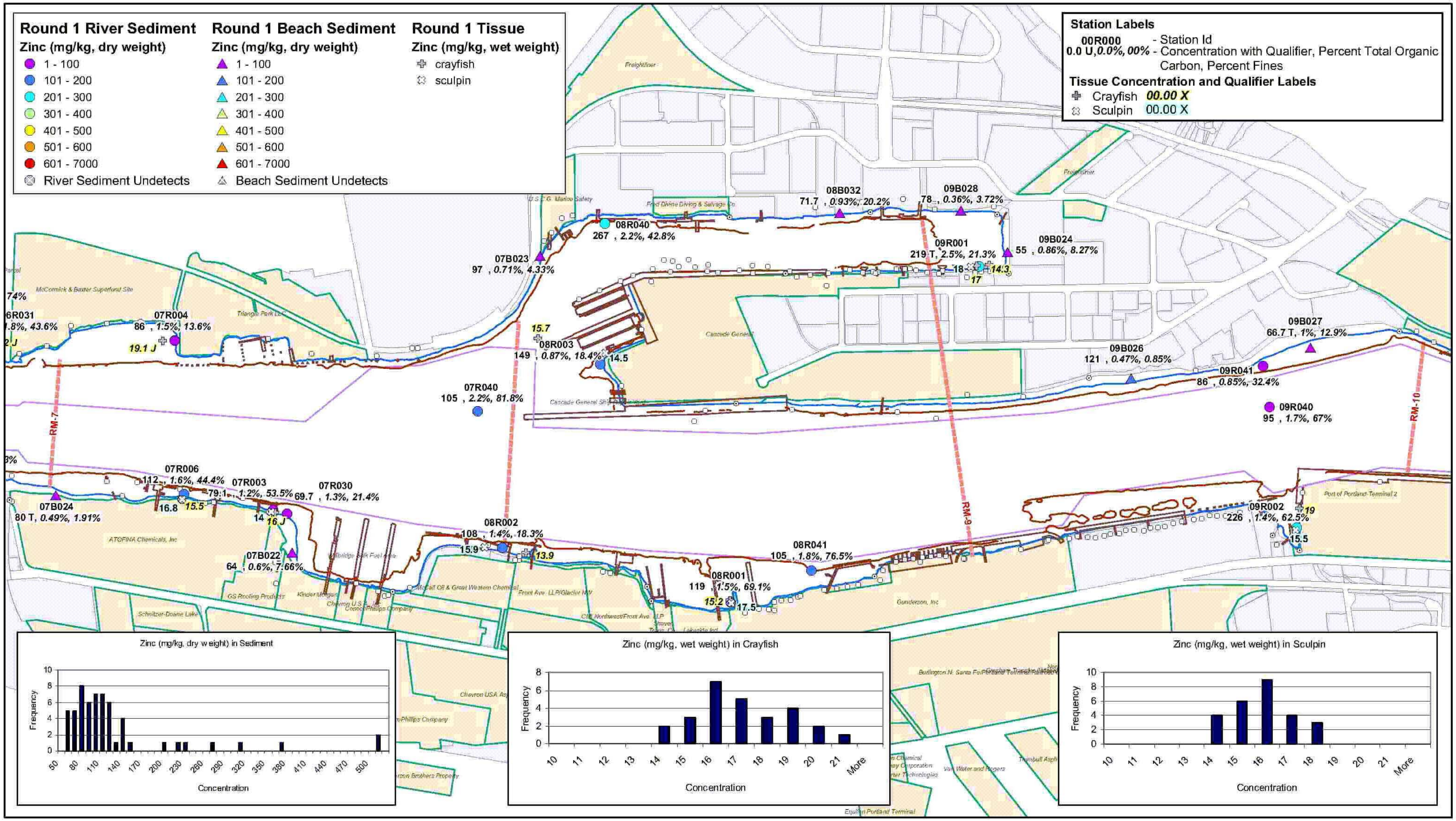
Figure 4-9b
Portland Harbor RI/FS
Round 1 Report
Zinc Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003467
ANC03467



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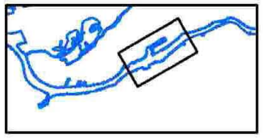

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Legend
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- Bridges
- Docks & Structures
- River Edge
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- Navigation Channel

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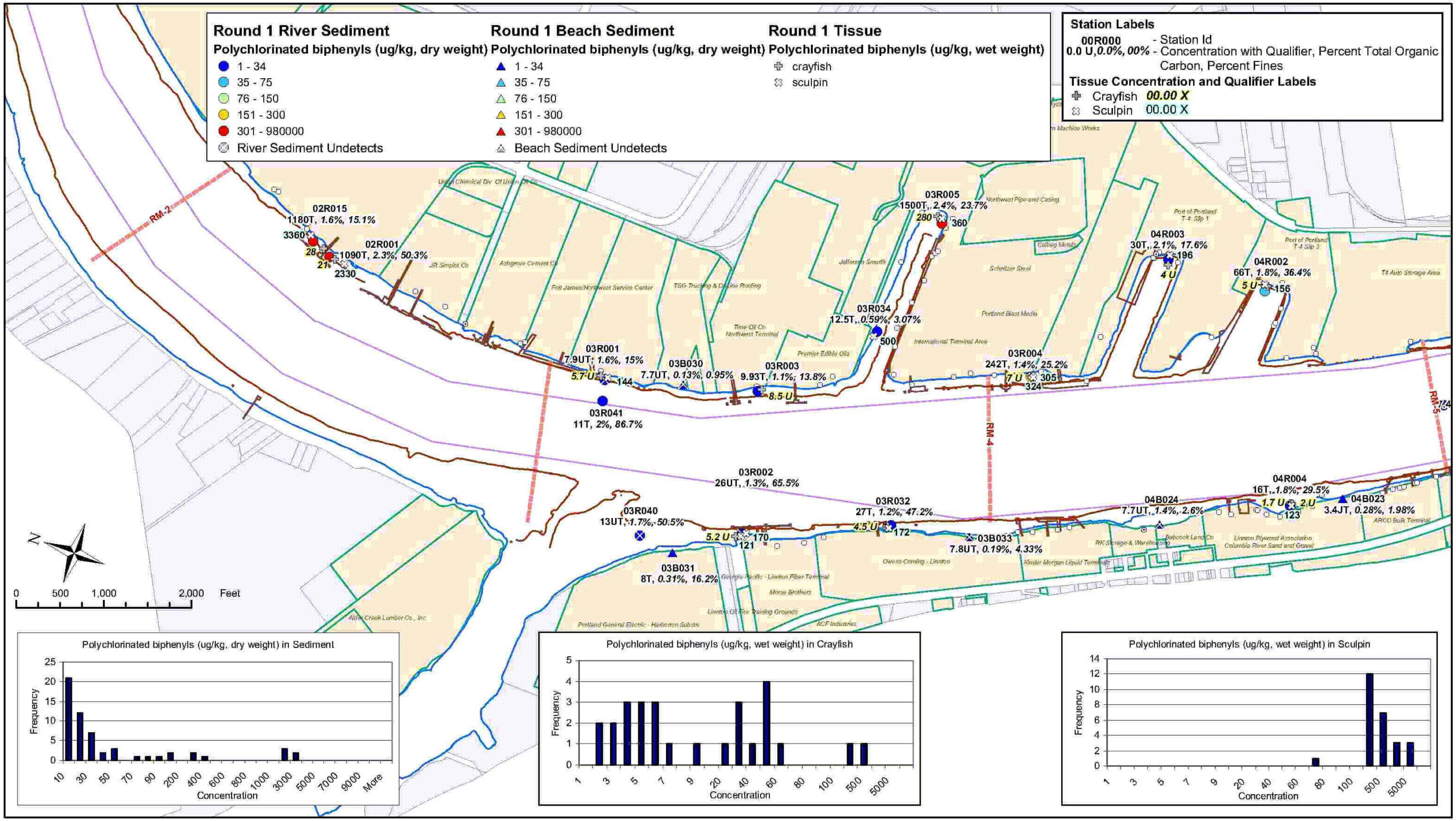
Figure 4-9c
Portland Harbor RI/FS
Round 1 Report
Zinc Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003468
ANC03468



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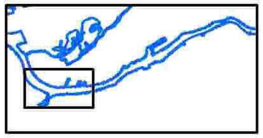

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Legend

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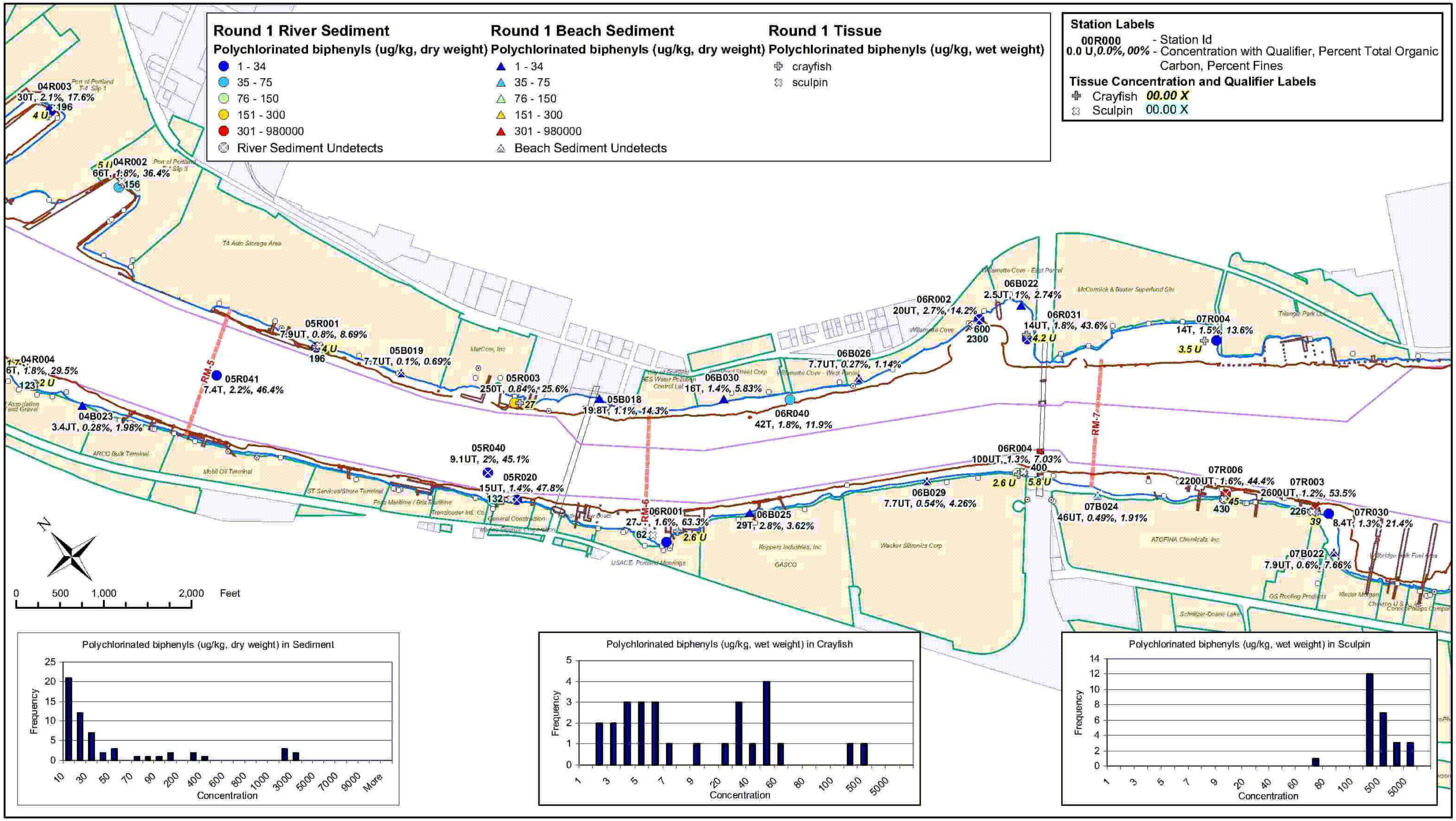
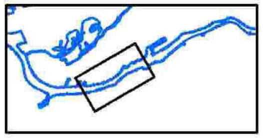
Figure 4-10a
Portland Harbor RI/FS
Round 1 Report
Polychlorinated biphenyls
Concentrations in
Surface Sediment,
Sculpin, and Crayfish

BZTO104(e)003469
ANC03469





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Legend

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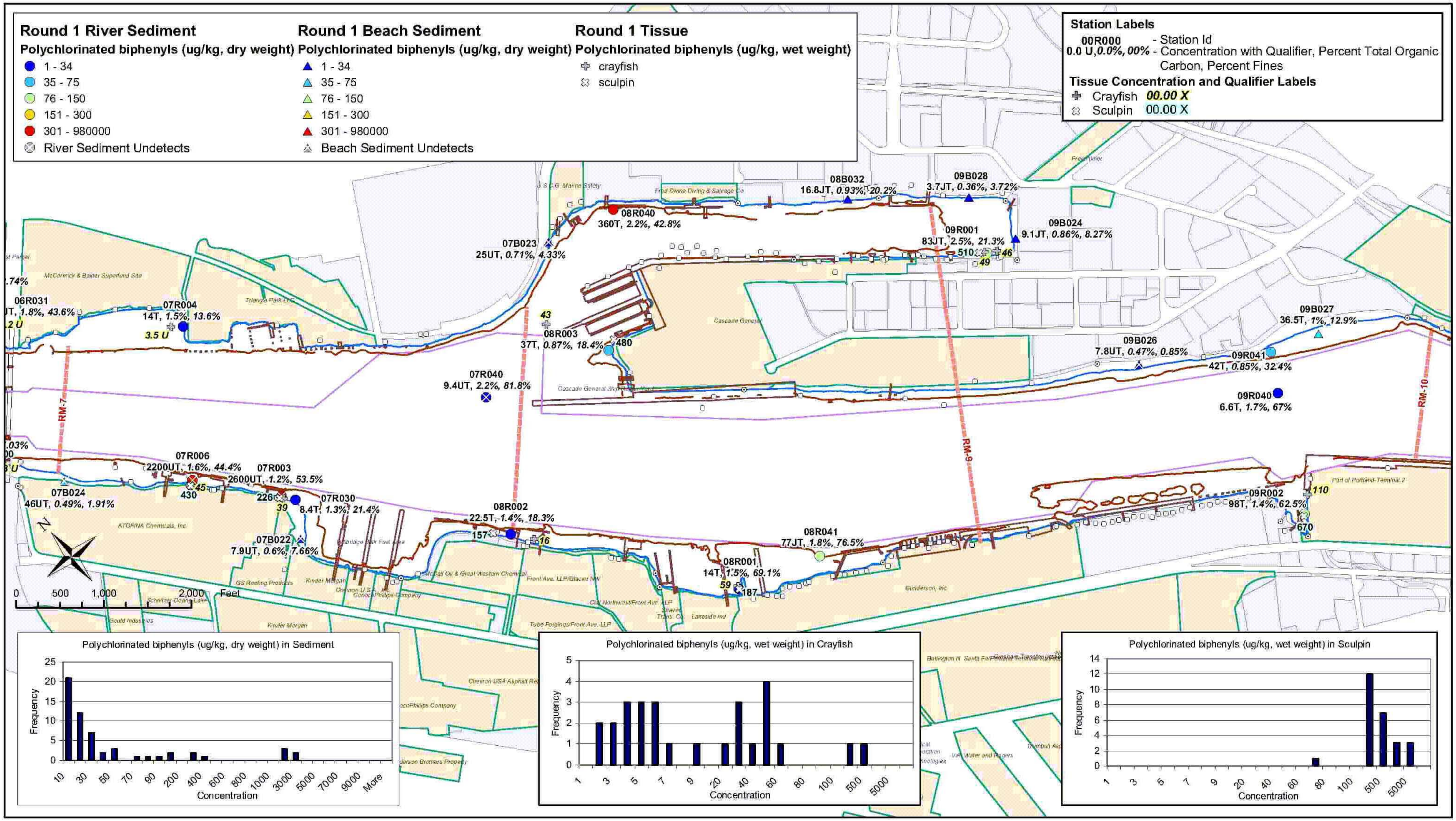
Figure 4-10b
Portland Harbor RI/FS
Round 1 Report
Polychlorinated biphenyls Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003470
ANC03470



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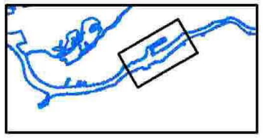

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Legend

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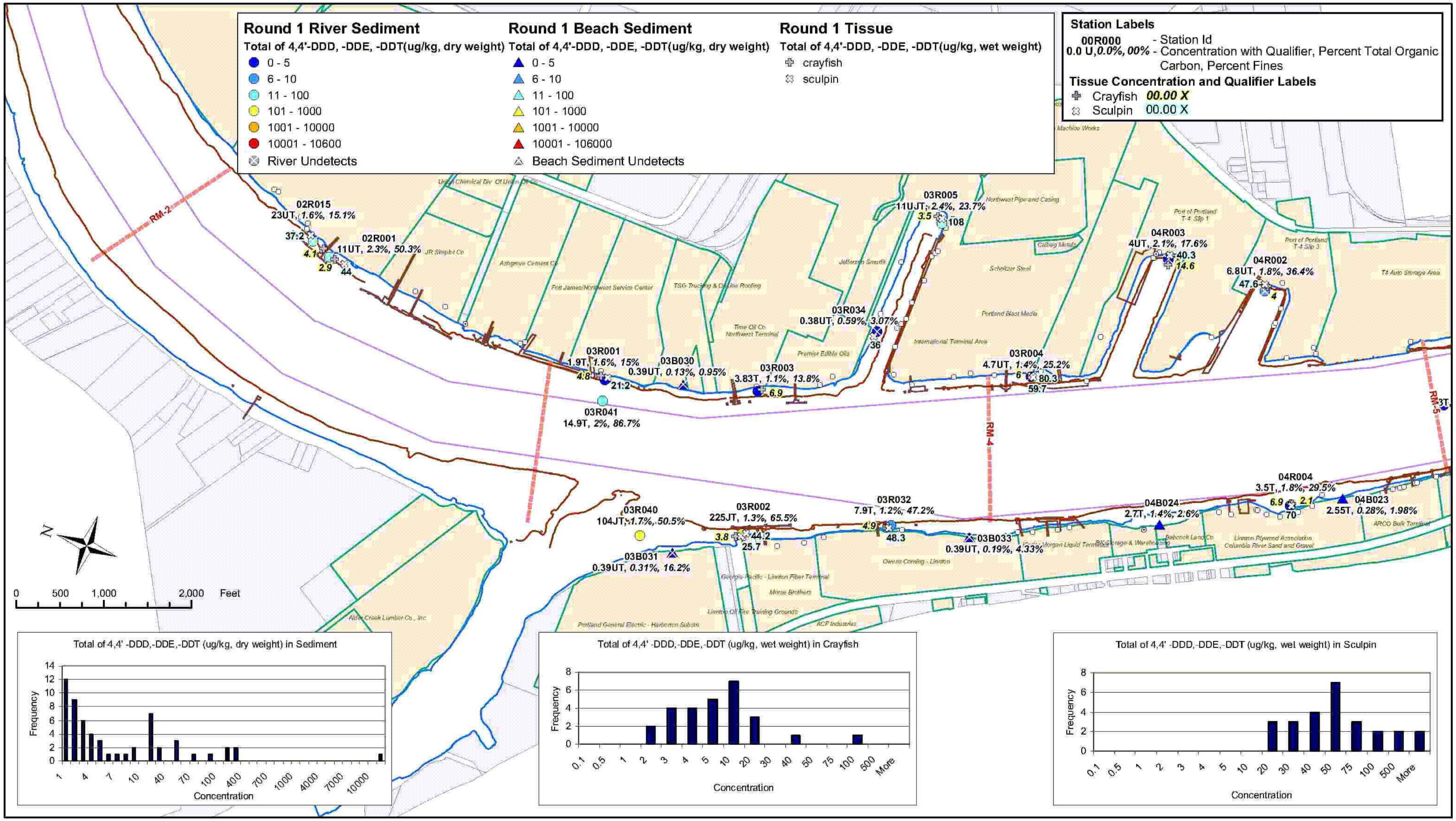
Figure 4-10c
Portland Harbor RI/FS
Round 1 Report
Polychlorinated biphenyls
Concentrations in
Surface Sediment,
Sculpin, and Crayfish



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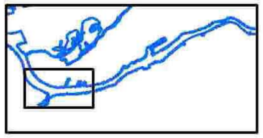

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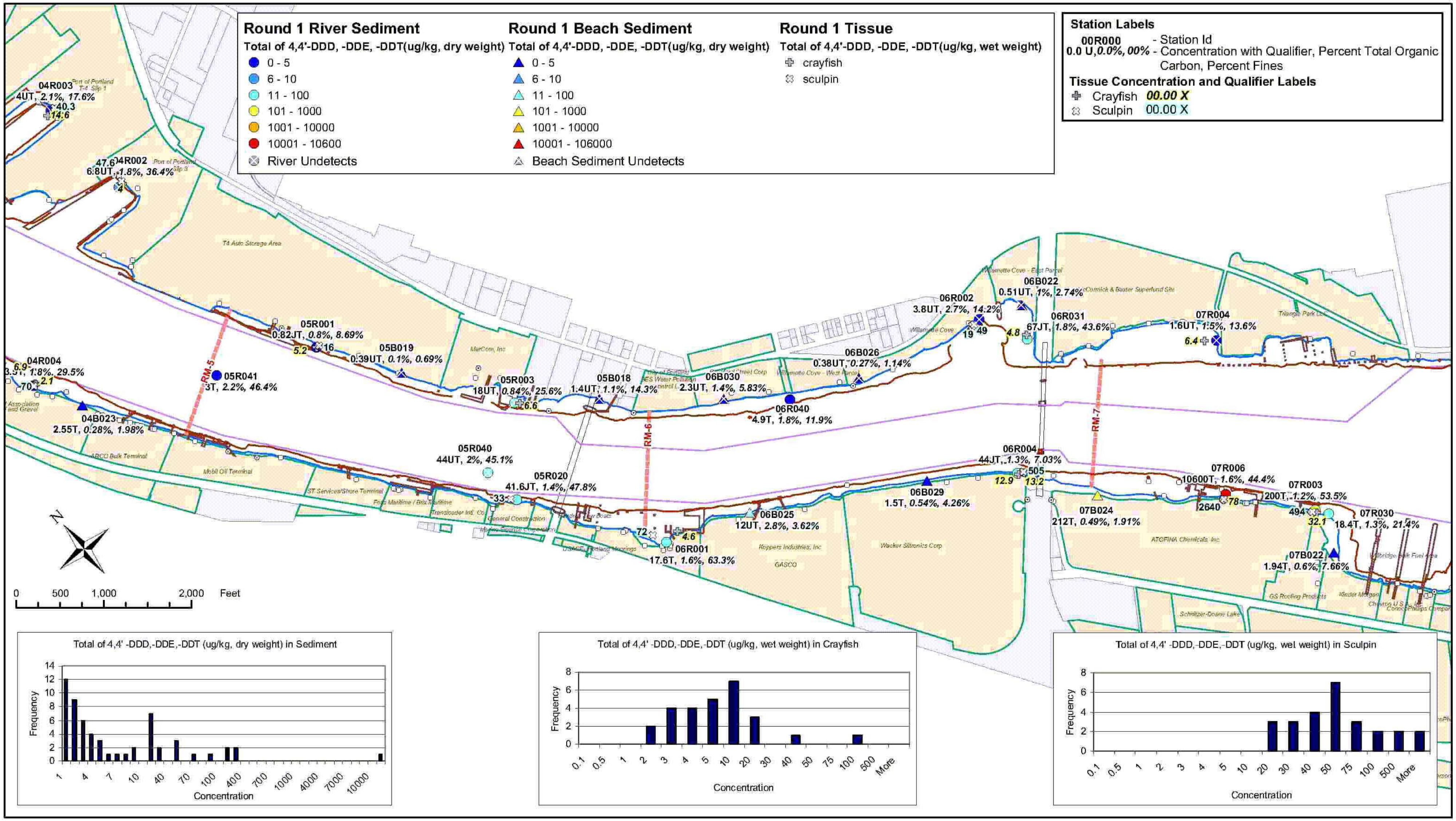
Figure 4-11a
Portland Harbor RI/FS
Round 1 Report
Total of 4,4' -DDD, -DDE, -DDT
Concentrations in
Surface Sediment,
Sculpin, and Crayfish

BZTO104(e)003472
ANC03472



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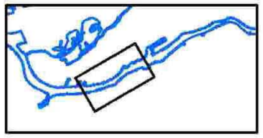

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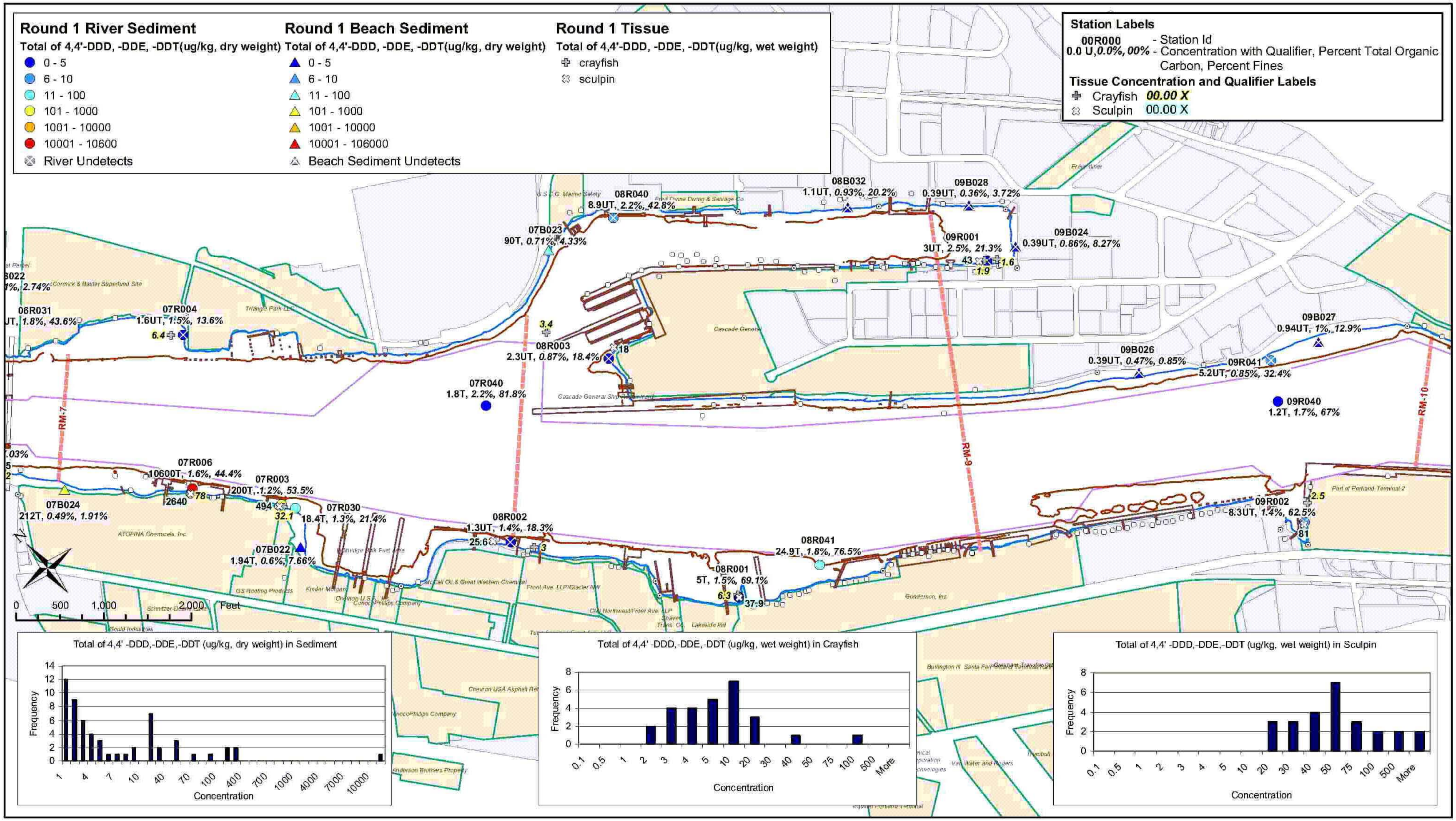
Figure 4-11b
Portland Harbor RI/FS
Round 1 Report
Total of 4,4' -DDD, -DDE, -DDT Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003473
ANC03473



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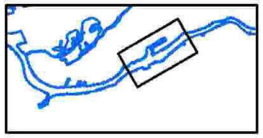

FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS.
Channel & River miles: Developed from US Army Corps of Engineers information.
Bathymetric Information: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. (DEA) Dec. 2001/Jan. 2002 and July/Sept 2002.
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Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report PCBs.mxd)
Plot Date: 09/30/2004

Legend

- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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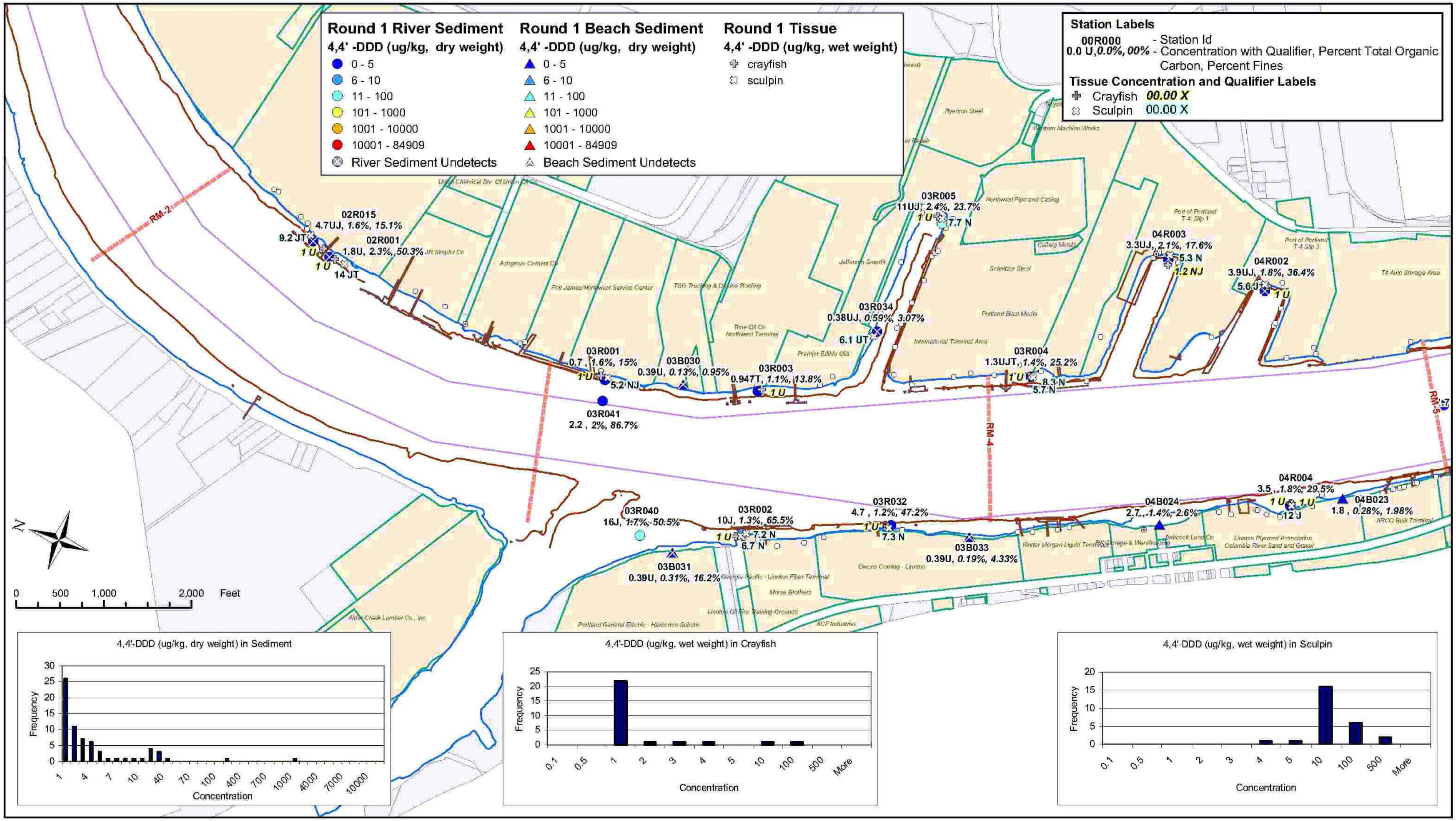
Figure 4-11c
Portland Harbor RI/FS
Round 1 Report
Total of 4,4' -DDD, -DDE, -DDT
Concentrations in
Surface Sediment,
Sculpin, and Crayfish



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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report DDD.mxd)
Plot Date: 09/16/2004

Legend
City of Portland Outfall
Abandoned City of Portland Outfalls
Private Outfalls
River Mile
- 15 ft. Bathy Contour(-20 CRD)
Bridges
Docks & Structures
River Edge
Select Upland Properties
Navigation Channel

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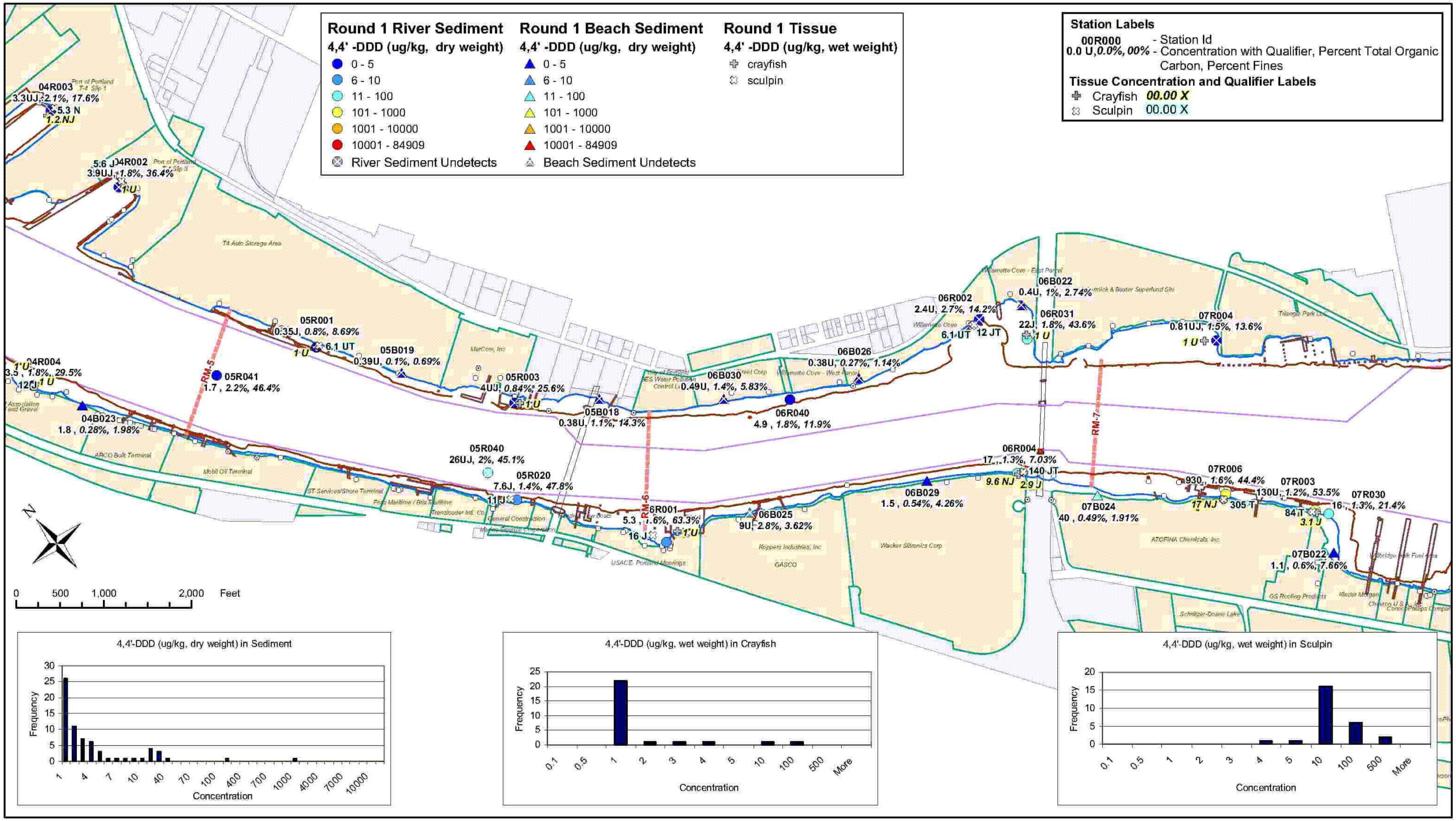
Figure 4-12a
Portland Harbor RI/FS
Round 1 Report
4,4'-DDD Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003475
ANC03475



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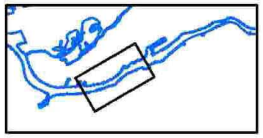

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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report DDD.mxd)
Plot Date: 09/16/2004

Legend

- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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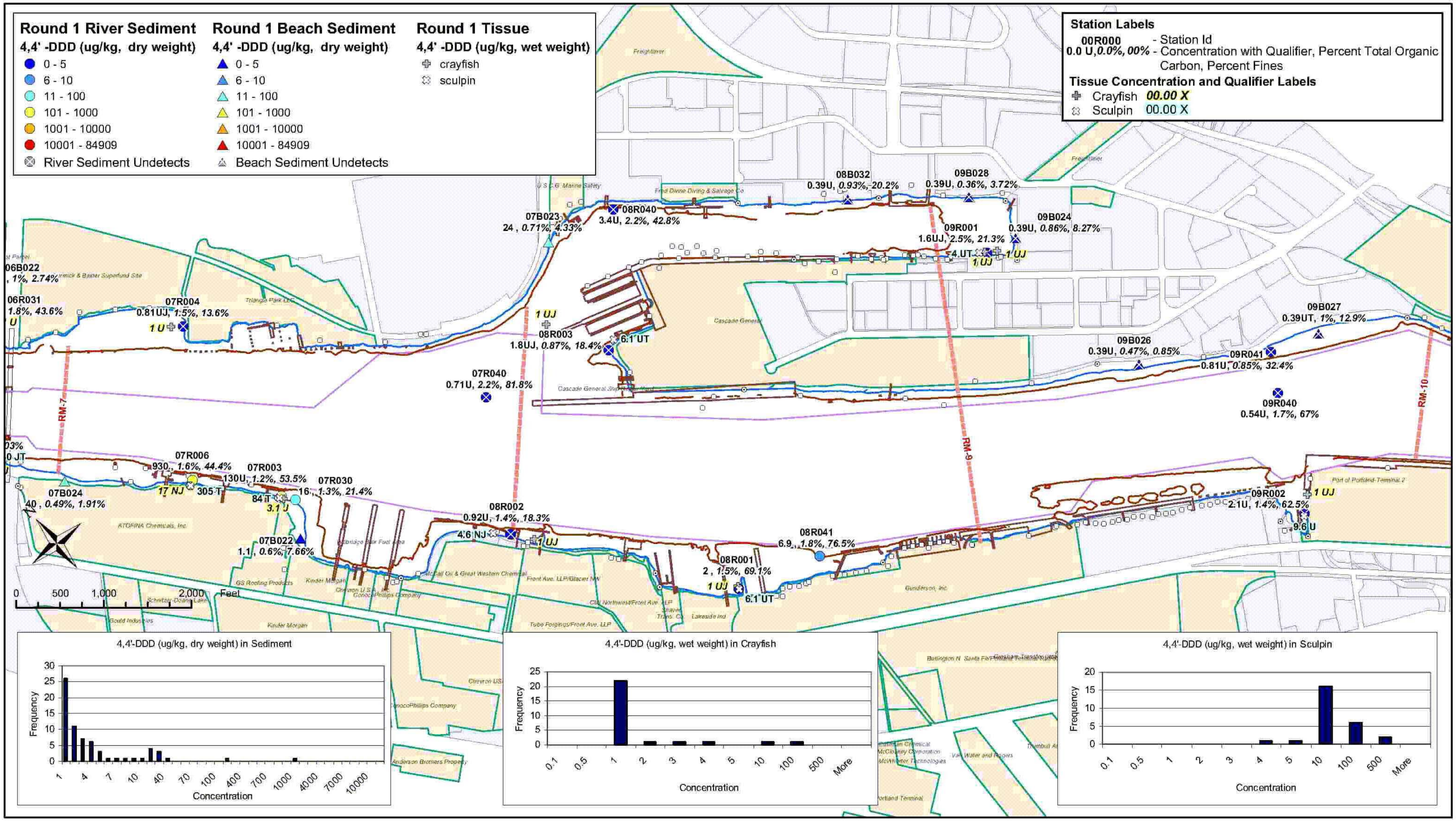
Figure 4-12b
Portland Harbor RI/FS
Round 1 Report
4,4'-DDD Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003476
ANC03476



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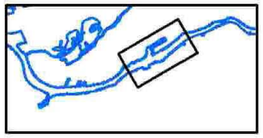

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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report DDD.mxd)
Plot Date: 09/16/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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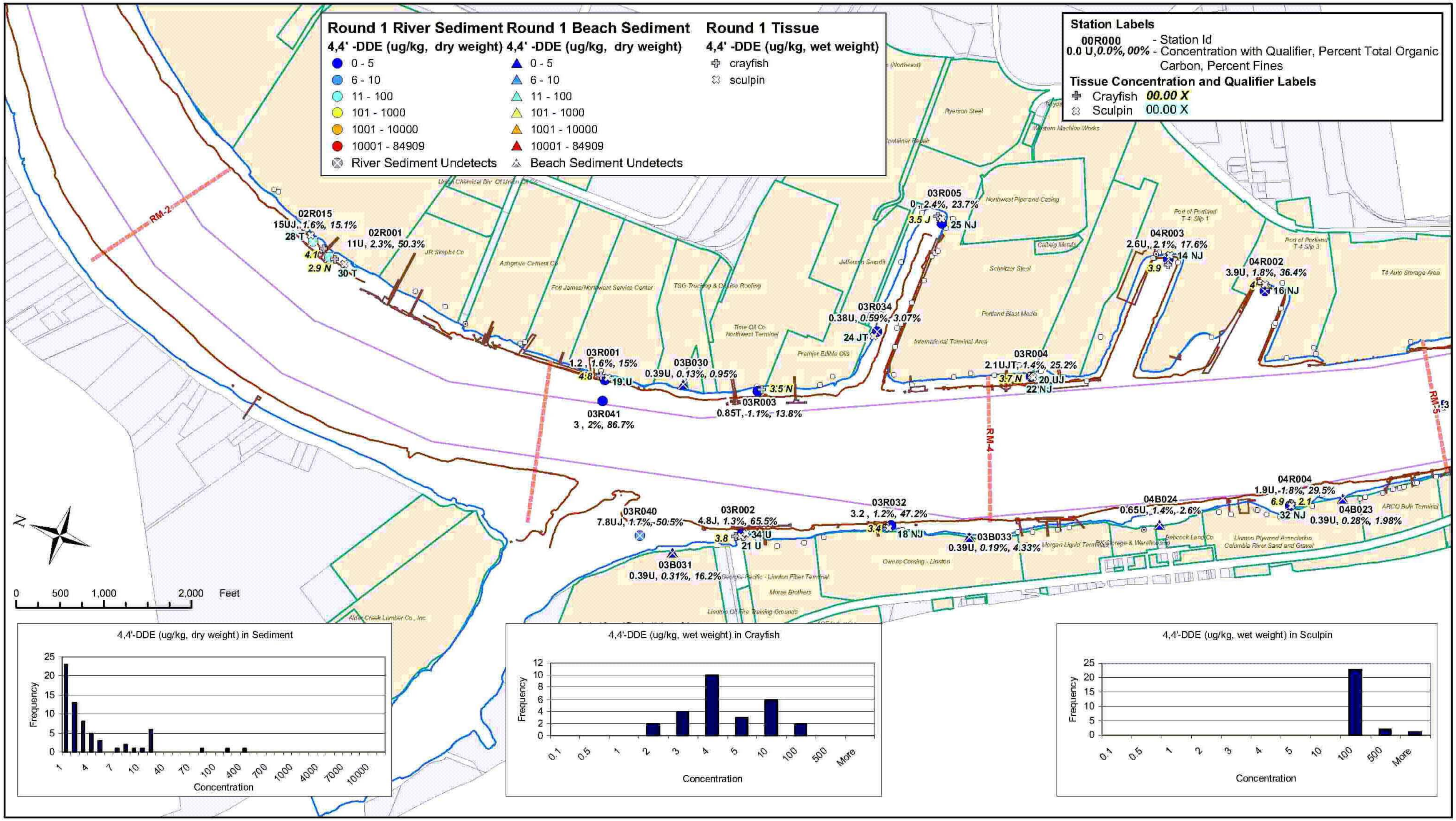
Figure 4-12c
Portland Harbor RI/FS
Round 1 Report
4,4'-DDD Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003477
ANC03477



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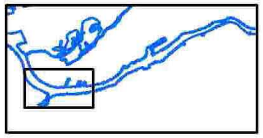

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Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).
Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report DDE.mxd)
Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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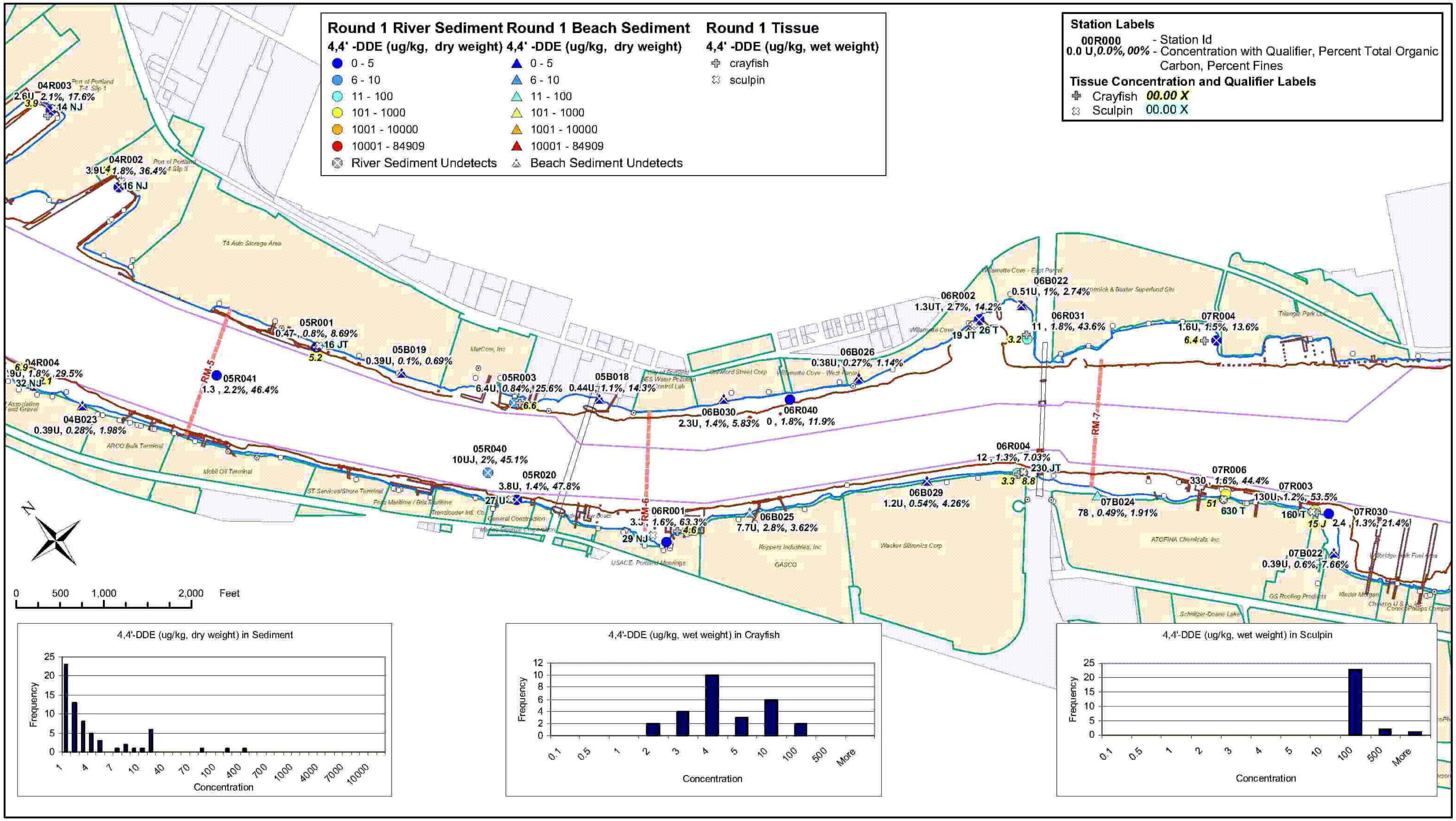
Figure 4-13a
Portland Harbor RI/FS
Round 1 Report
4,4'-DDE Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003478
ANC03478



LWG Lower Willamette Group

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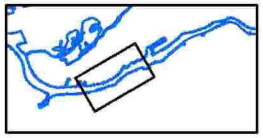

FEATURE SOURCES:
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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report DDE.mxd)
Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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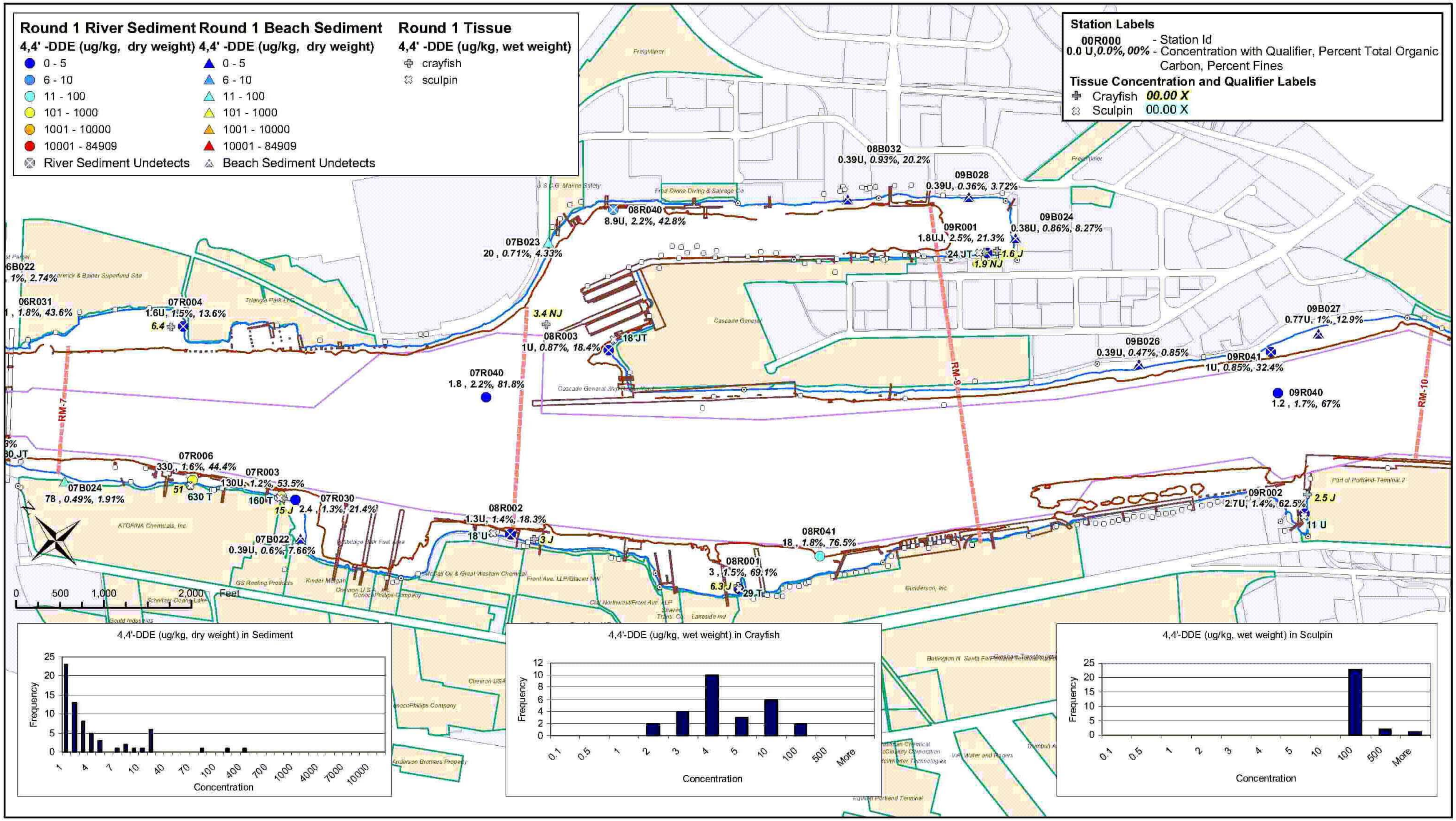
Figure 4-13b
Portland Harbor RI/FS
Round 1 Report
4,4'-DDE Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003479
ANC03479



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FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS .
Channel & River miles: Developed from US Army Corps of Engineers information.
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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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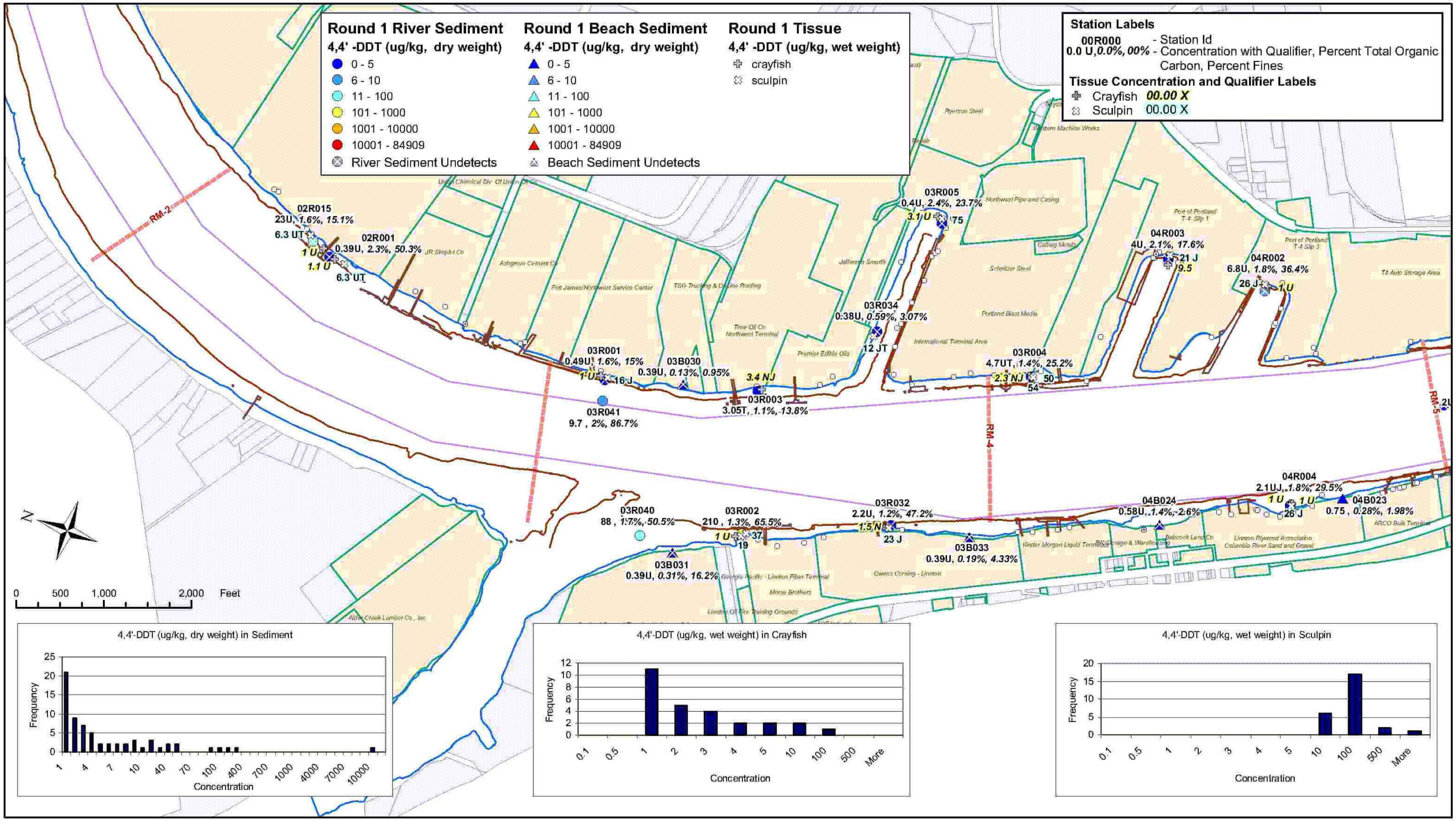
Figure 4-13c
Portland Harbor RI/FS
Round 1 Report
4,4'-DDE Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003480
ANC03480



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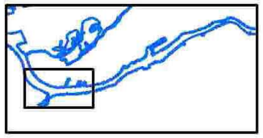

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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report DDT.mxd)
Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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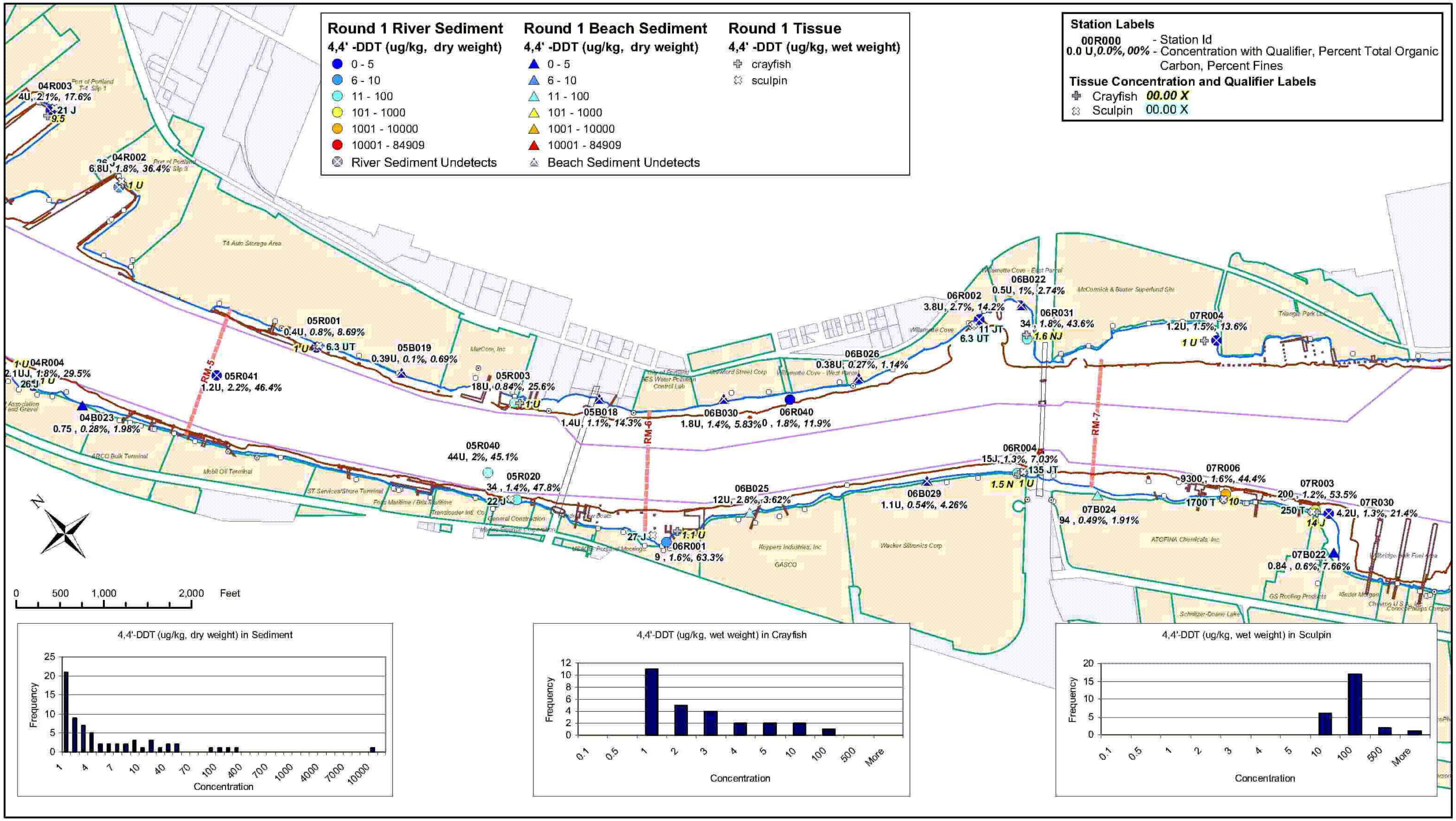
Figure 4-14a
Portland Harbor RI/FS
Round 1 Report
4,4'-DDT Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003481
ANC03481



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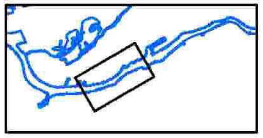

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Legend
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- Abandoned City of Portland Outfalls
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- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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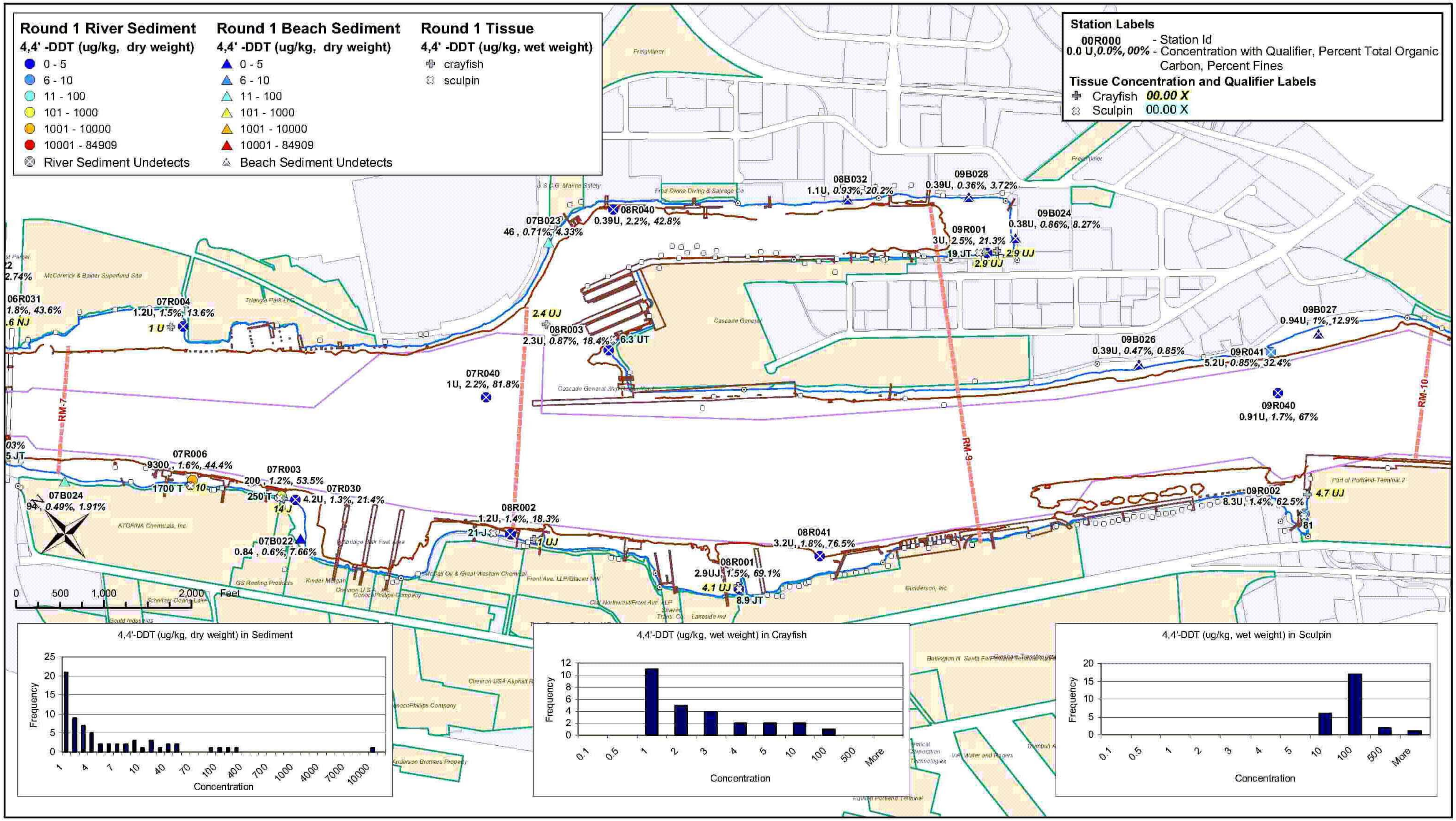
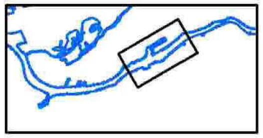
Figure 4-14b
Portland Harbor RI/FS
Round 1 Report
4,4'-DDT Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003482
ANC03482





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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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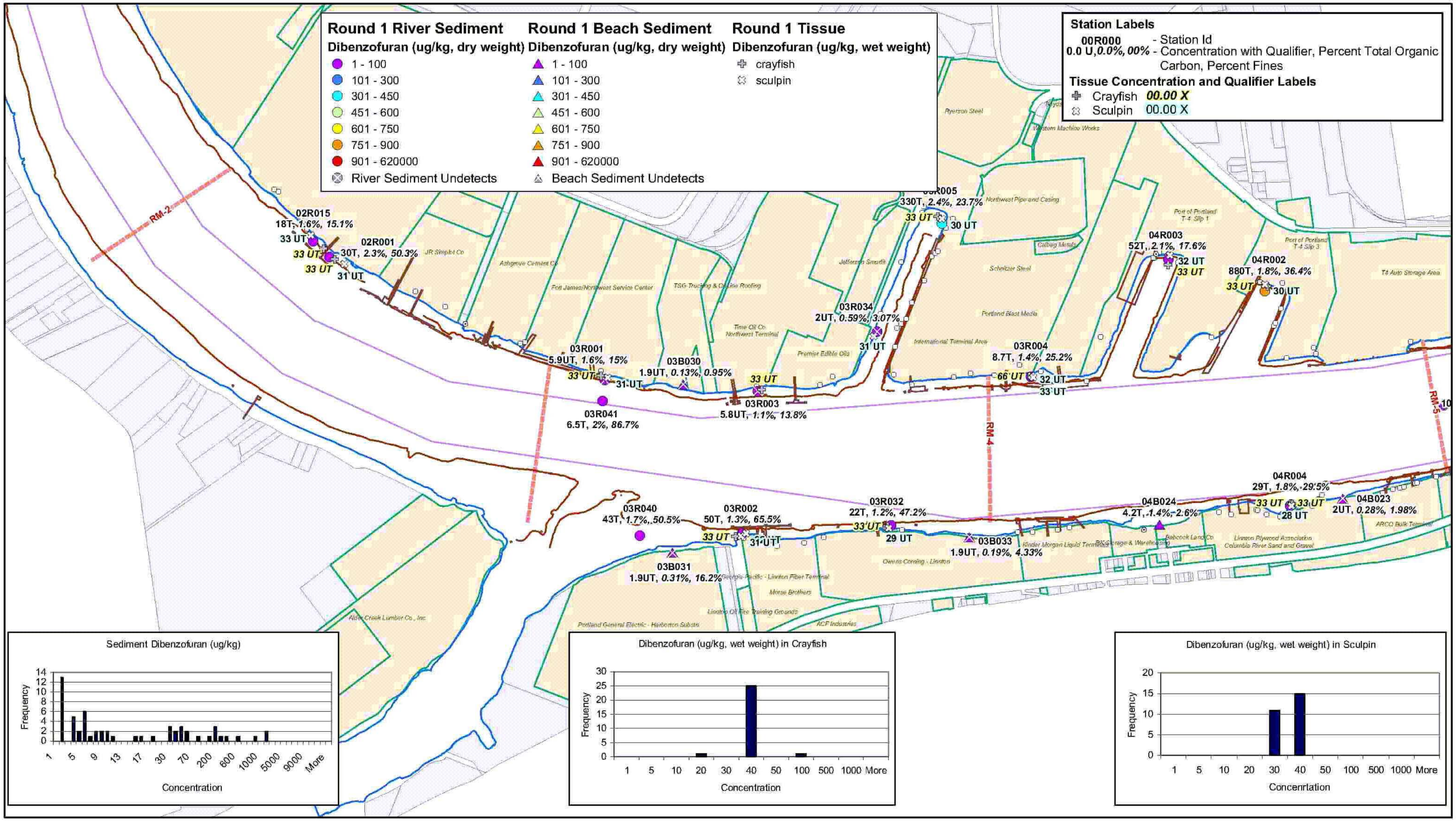
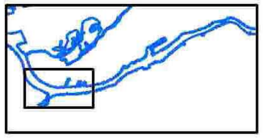
Figure 4-14c
Portland Harbor RI/FS
Round 1 Report
4,4'-DDT Concentrations in Surface Sediment, Sculpin, and Crayfish





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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report Dibenzo.mxd)
Plot Date: 09/30/2004

Legend

- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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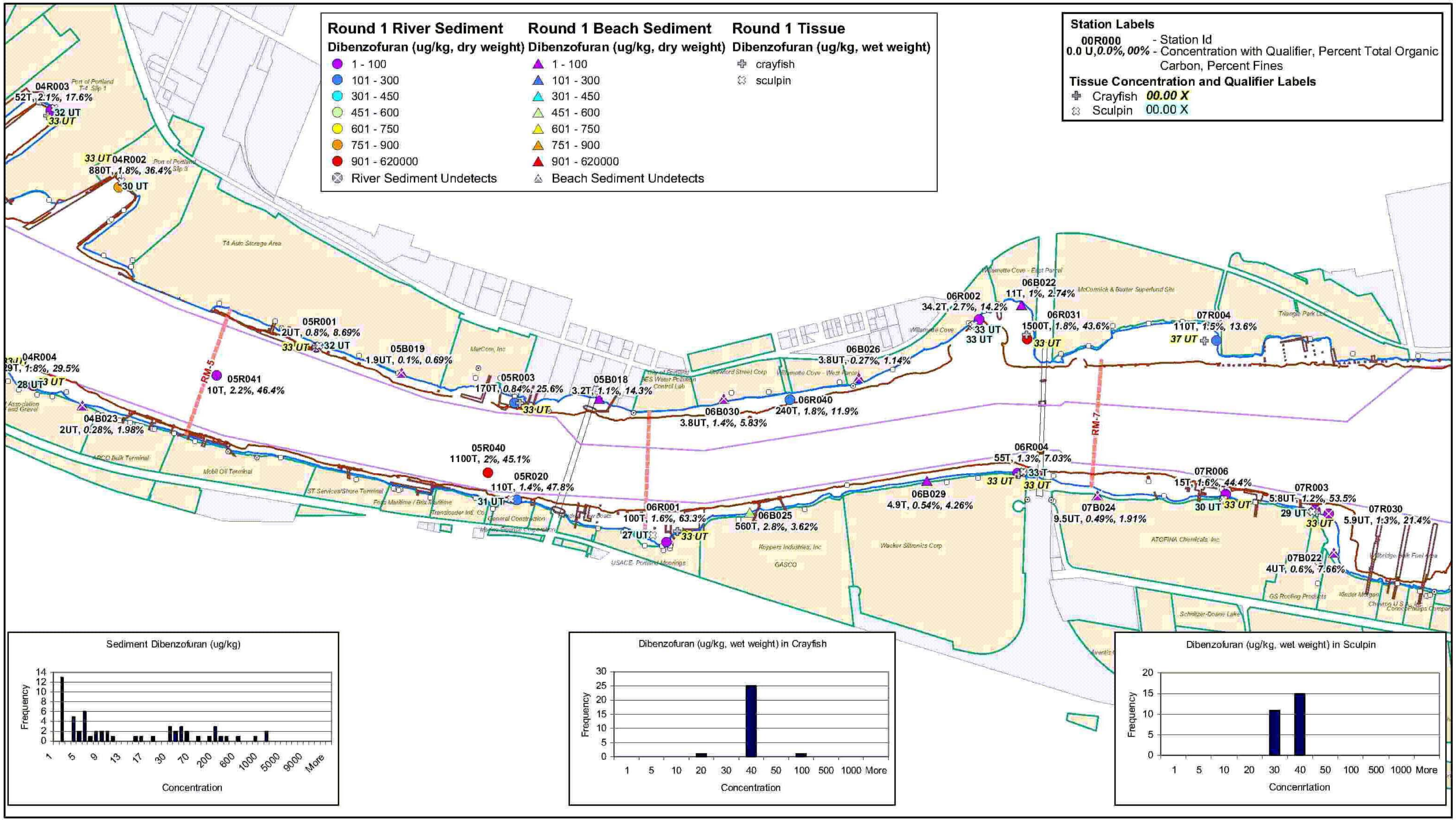
Figure 4-15a
Portland Harbor RI/FS
Round 1 Report
Dibenzofuran Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003484
ANC03484



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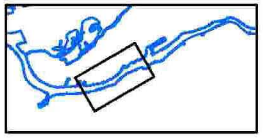

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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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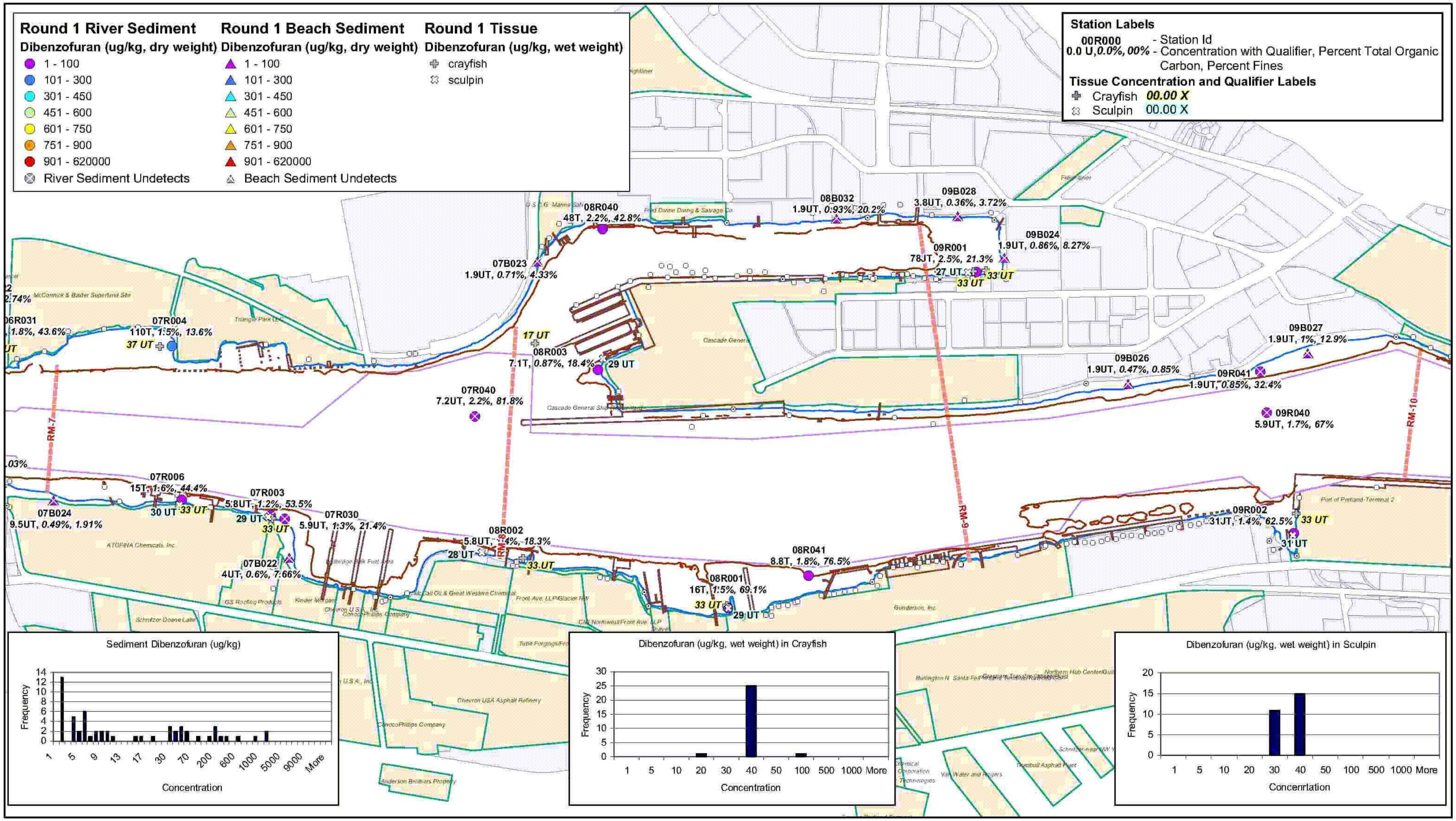
Figure 4-15b
Portland Harbor RI/FS
Round 1 Report
Dibenzofuran Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003485
ANC03485



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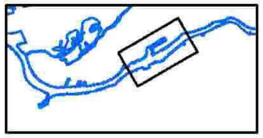

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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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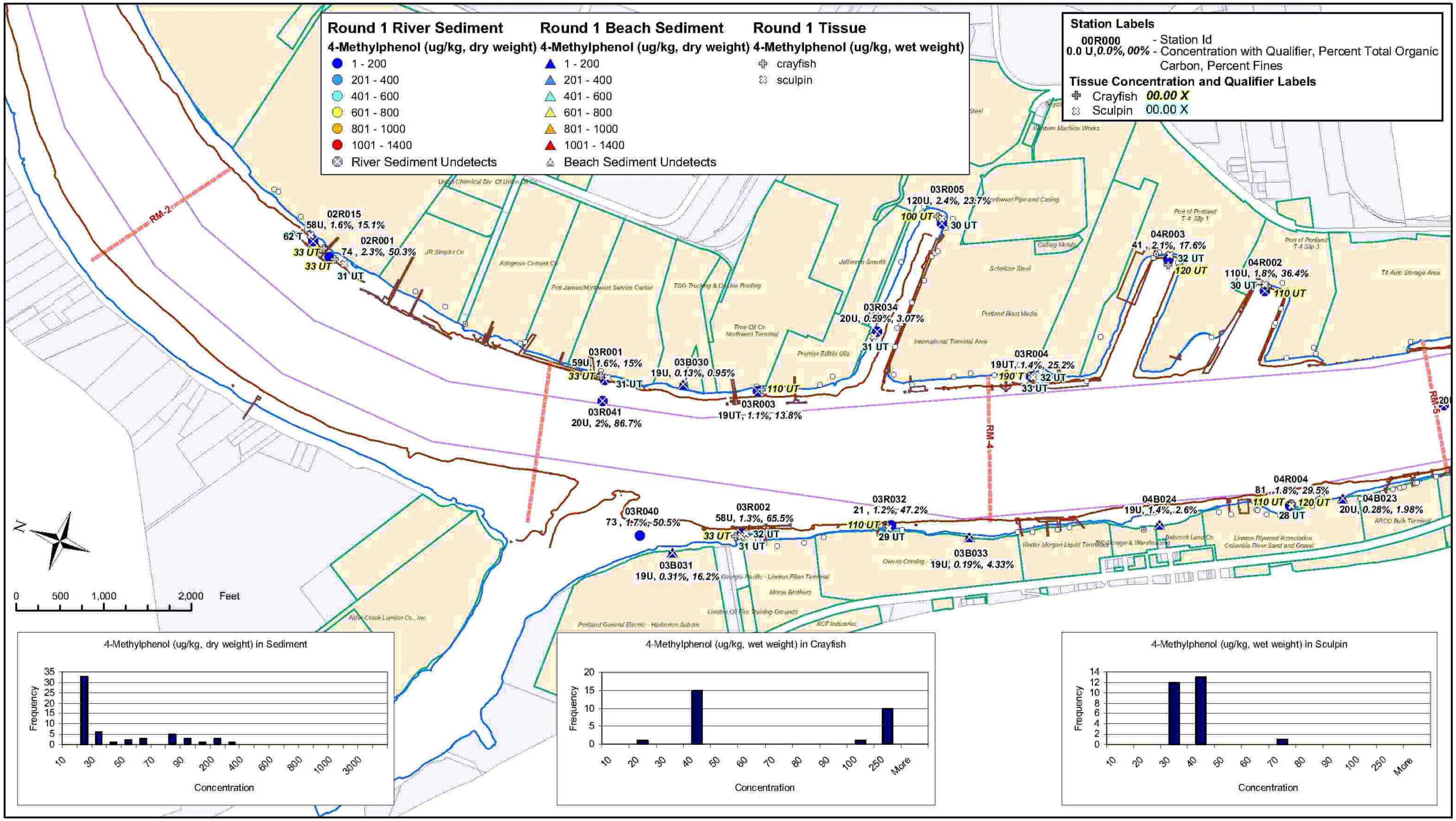
Figure 4-15c
Portland Harbor RI/FS
Round 1 Report
Dibenzofuran Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003486
ANC03486



LWG LOWER WILLAMETTE GROUP

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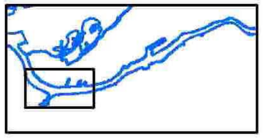

FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS.
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Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report 4Meth.mxd)
Plot Date: 09/30/2004

Legend

- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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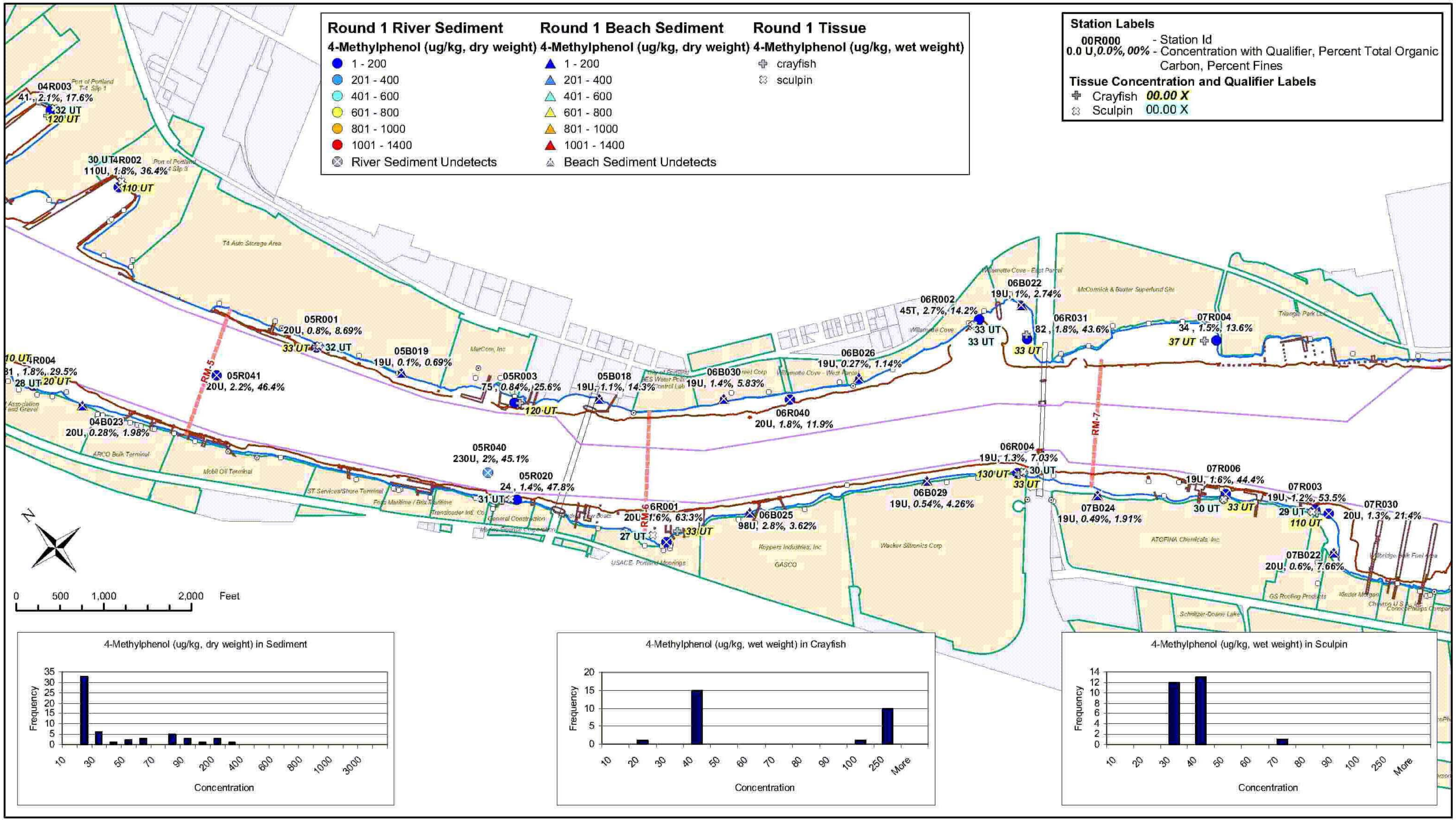
Figure 4-16a
Portland Harbor RI/FS
Round 1 Report
4-Methyphenol
Concentrations in
Surface Sediment,
Sculpin, and Crayfish

BZTO104(e)003487

ANC03487



LWG Lower Willamette Group

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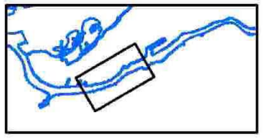

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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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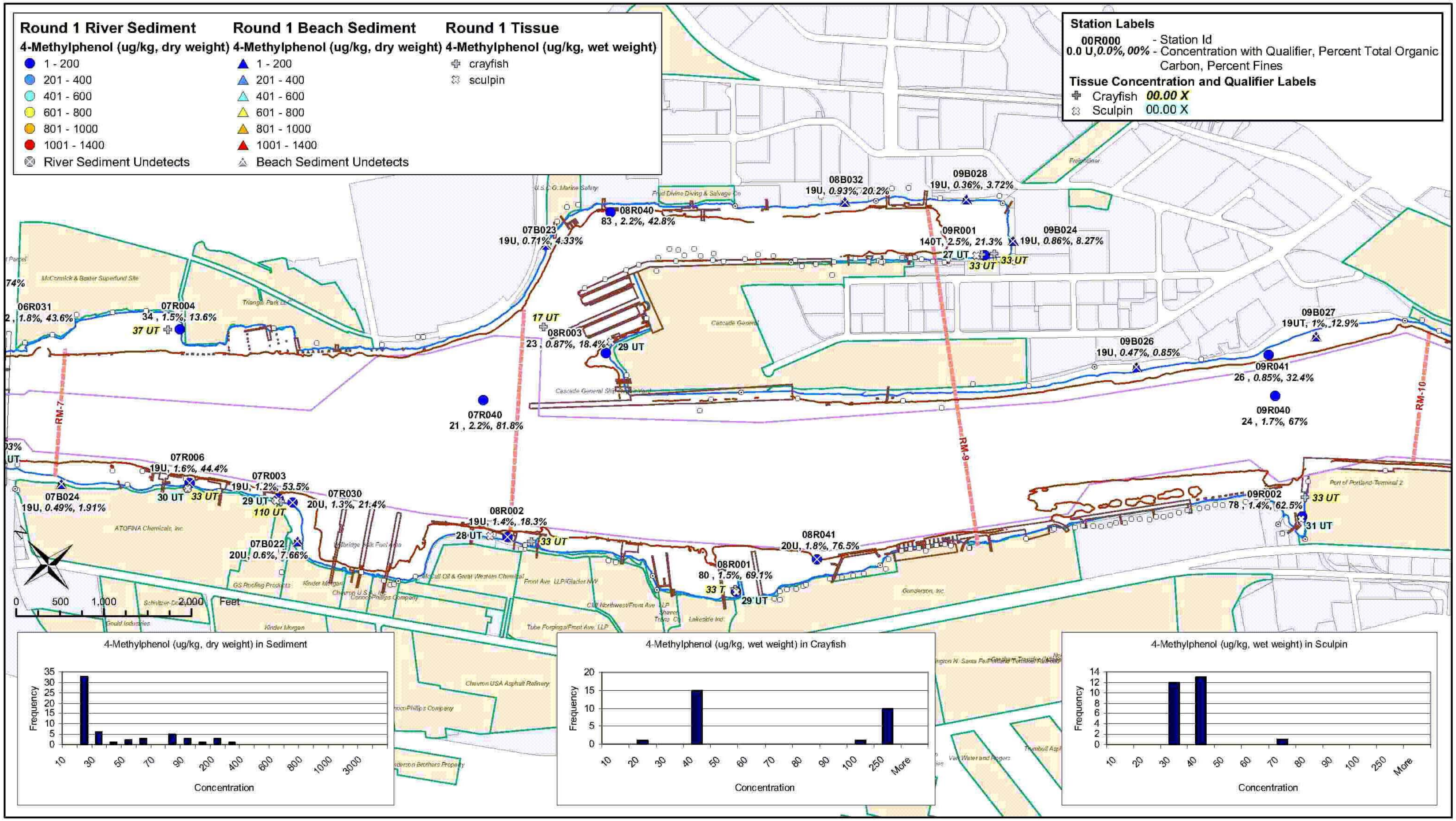
Figure 4-16b
Portland Harbor RI/FS
Round 1 Report
4-Methyphenol
Concentrations in
Surface Sediment,
Sculpin, and Crayfish

BZTO104(e)003488
ANC03488



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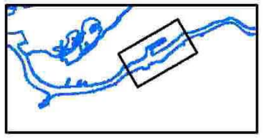

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Plot Date: 09/30/2004

Legend
City of Portland Outfall
Abandoned City of Portland Outfalls
Private Outfalls
River Mile
- 15 ft. Bathy Contour(-20 CRD)
Bridges
Docks & Structures
River Edge
Select Upland Properties
Navigation Channel

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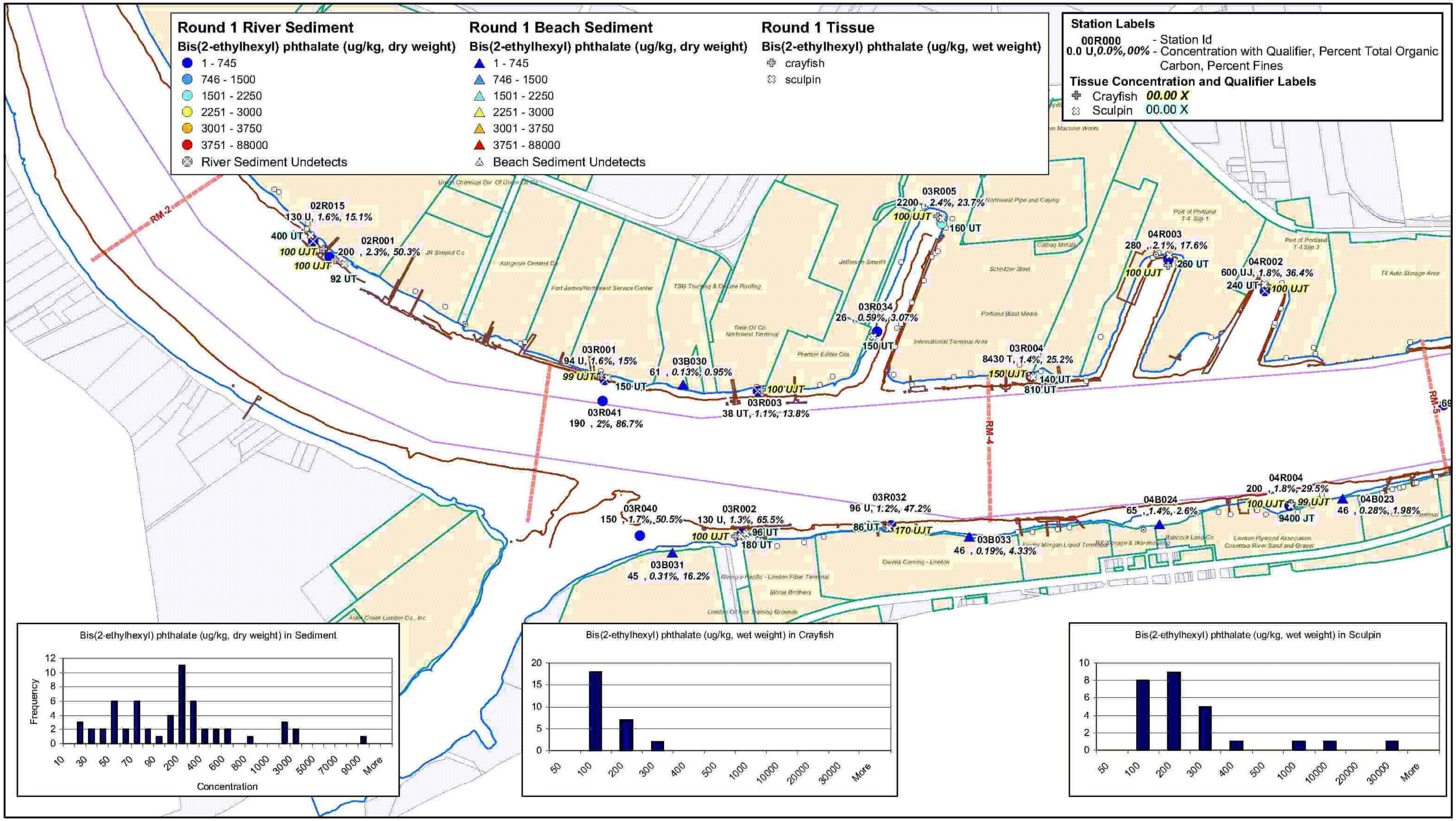
Figure 4-16c
Portland Harbor RI/FS
Round 1 Report
4-Methyphenol
Concentrations in
Surface Sediment,
Sculpin, and Crayfish

ANC03489
BZTO104(e)003489



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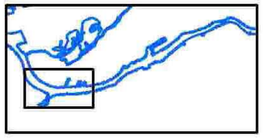

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Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report Bis2.mxd)
Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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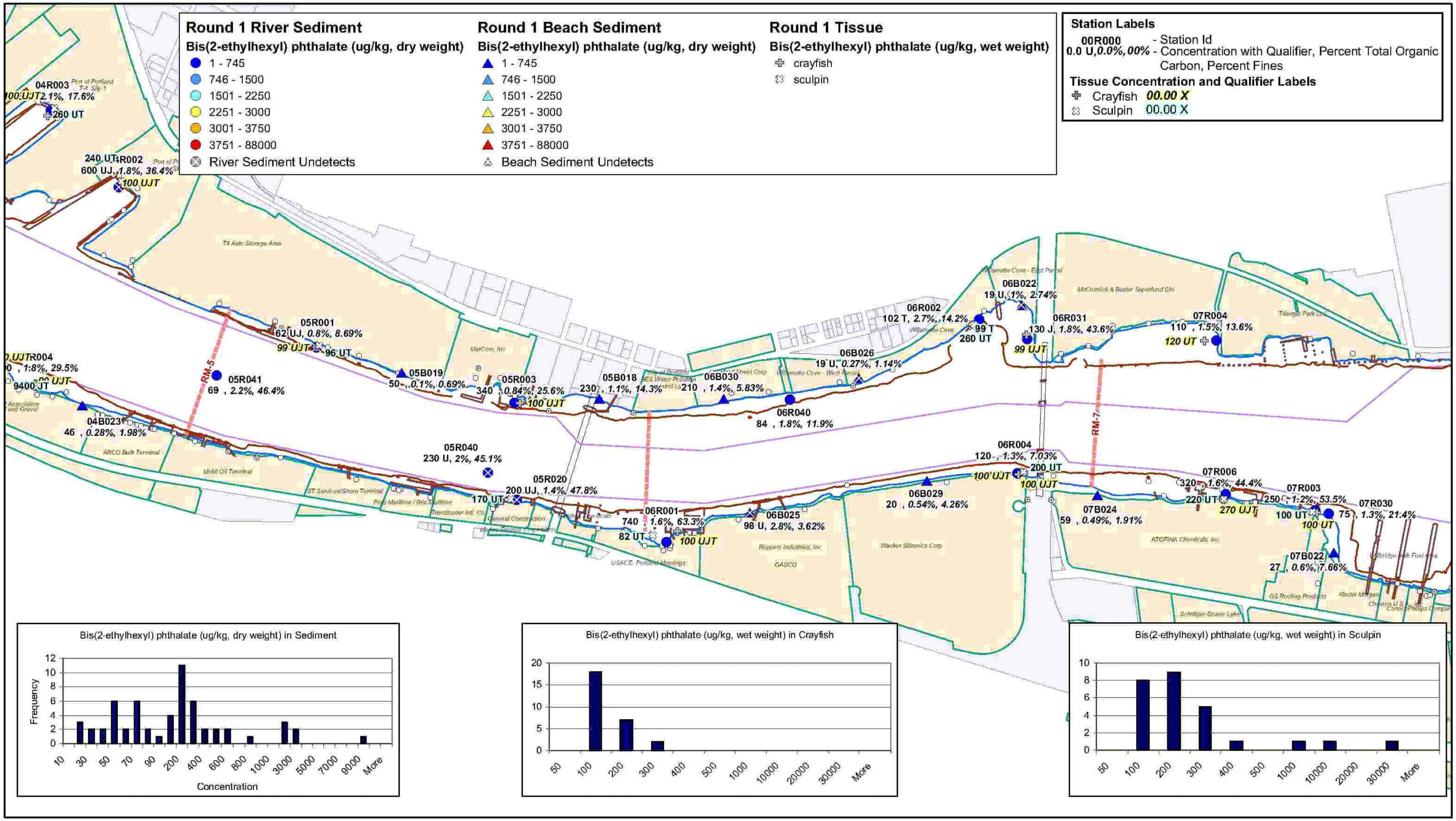
Figure 4-17a
Portland Harbor RI/FS
Round 1 Report
Bis(2-ethylhexyl) phthalate
Concentrations in
Surface Sediment,
Sculpin, and Crayfish

BZTO104(e)003490
ANC03490



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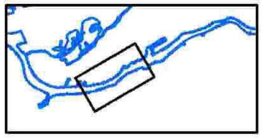

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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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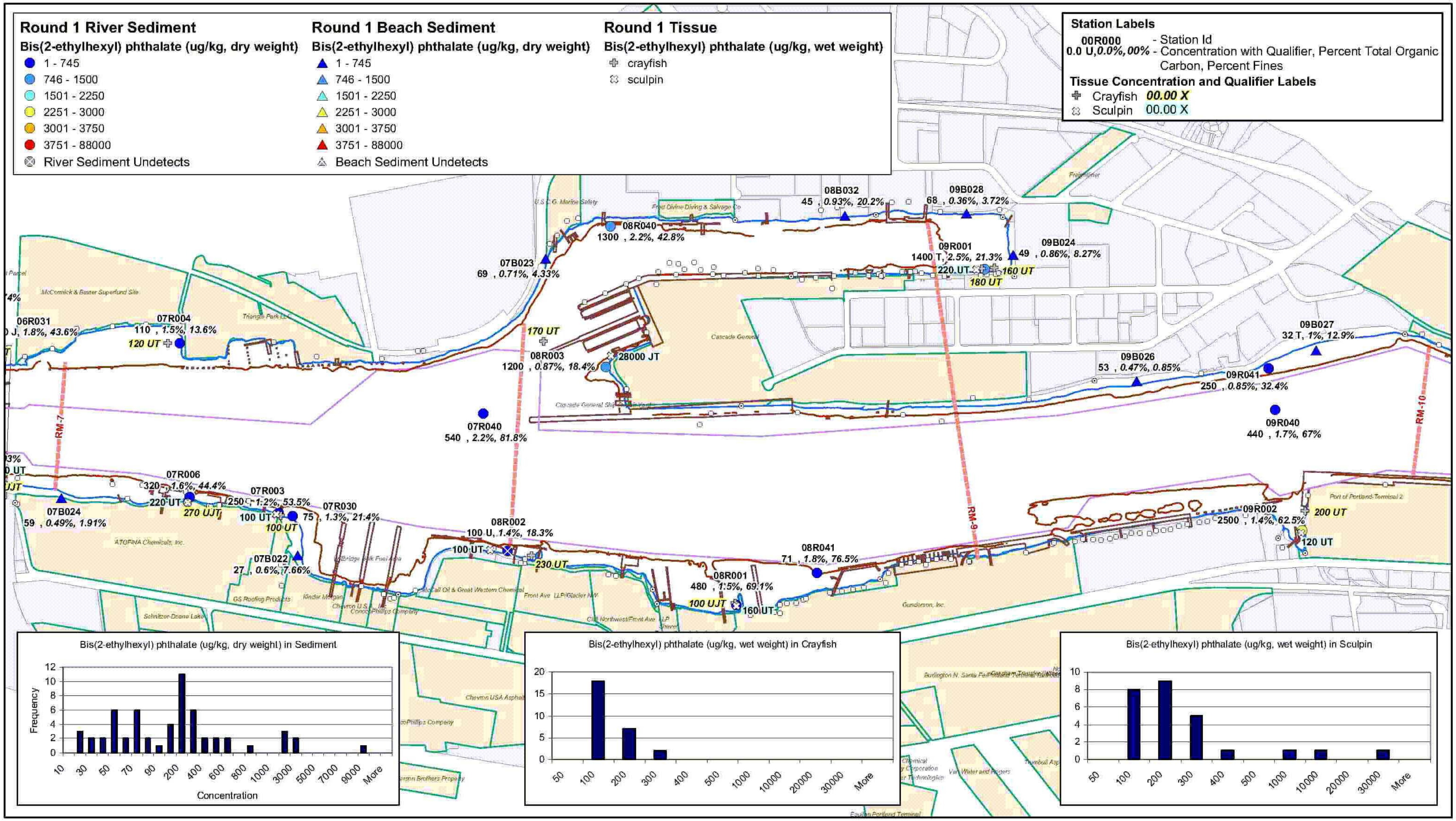
Figure 4-17b
Portland Harbor RI/FS
Round 1 Report
Bis(2-ethylhexyl) phthalate Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003491
ANC03491



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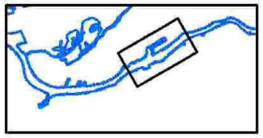

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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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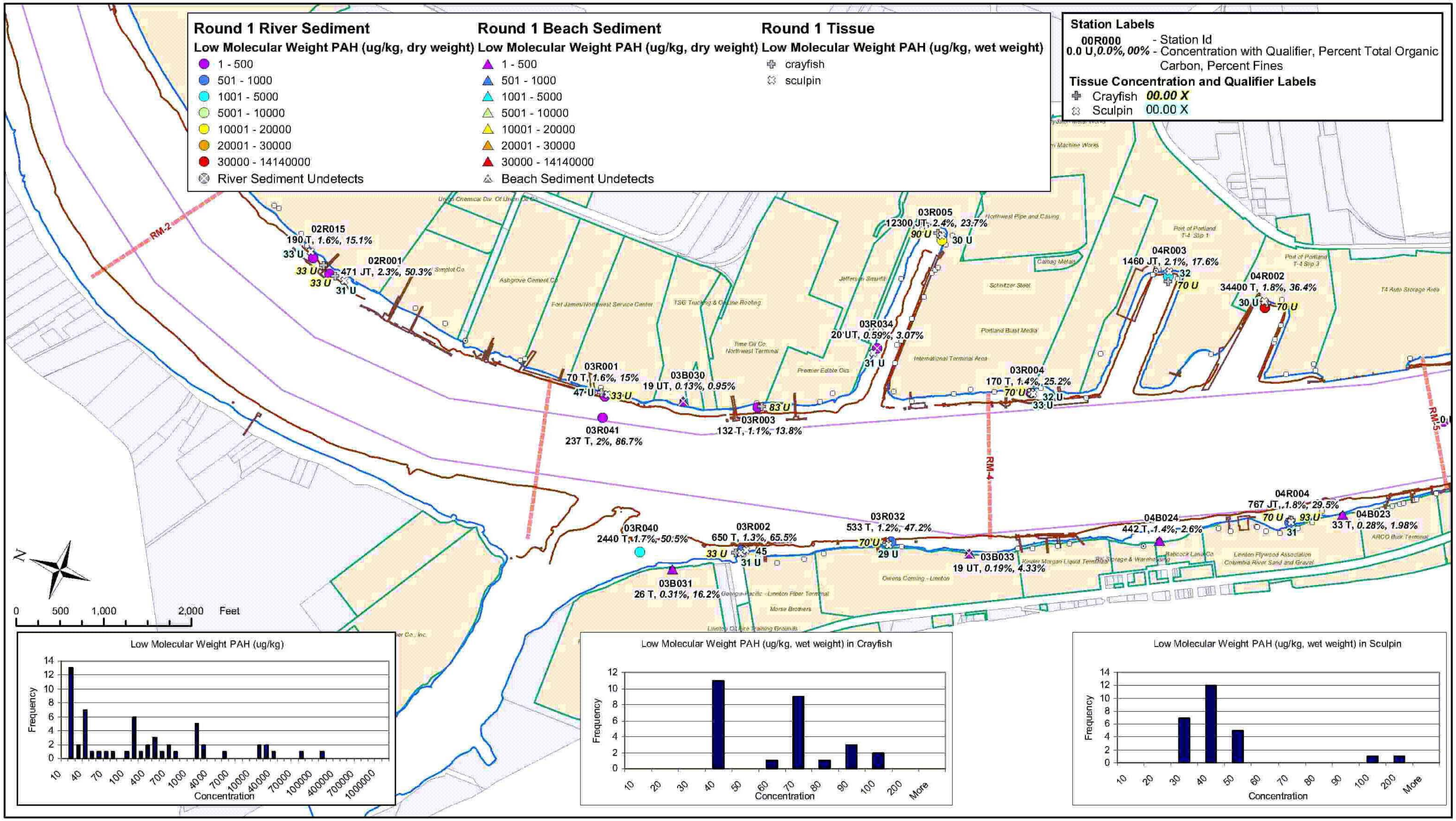
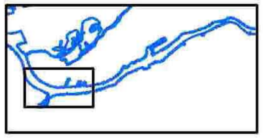
Figure 4-17c
Portland Harbor RI/FS
Round 1 Report
Bis(2-ethylhexyl) phthalate
Concentrations in
Surface Sediment,
Sculpin, and Crayfish

BZTO104(e)003492
ANC03492





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Plot Date: 10/01/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks &
- RiverEdgePoly_2001
- Select Upland Properties
- Navigation Channel

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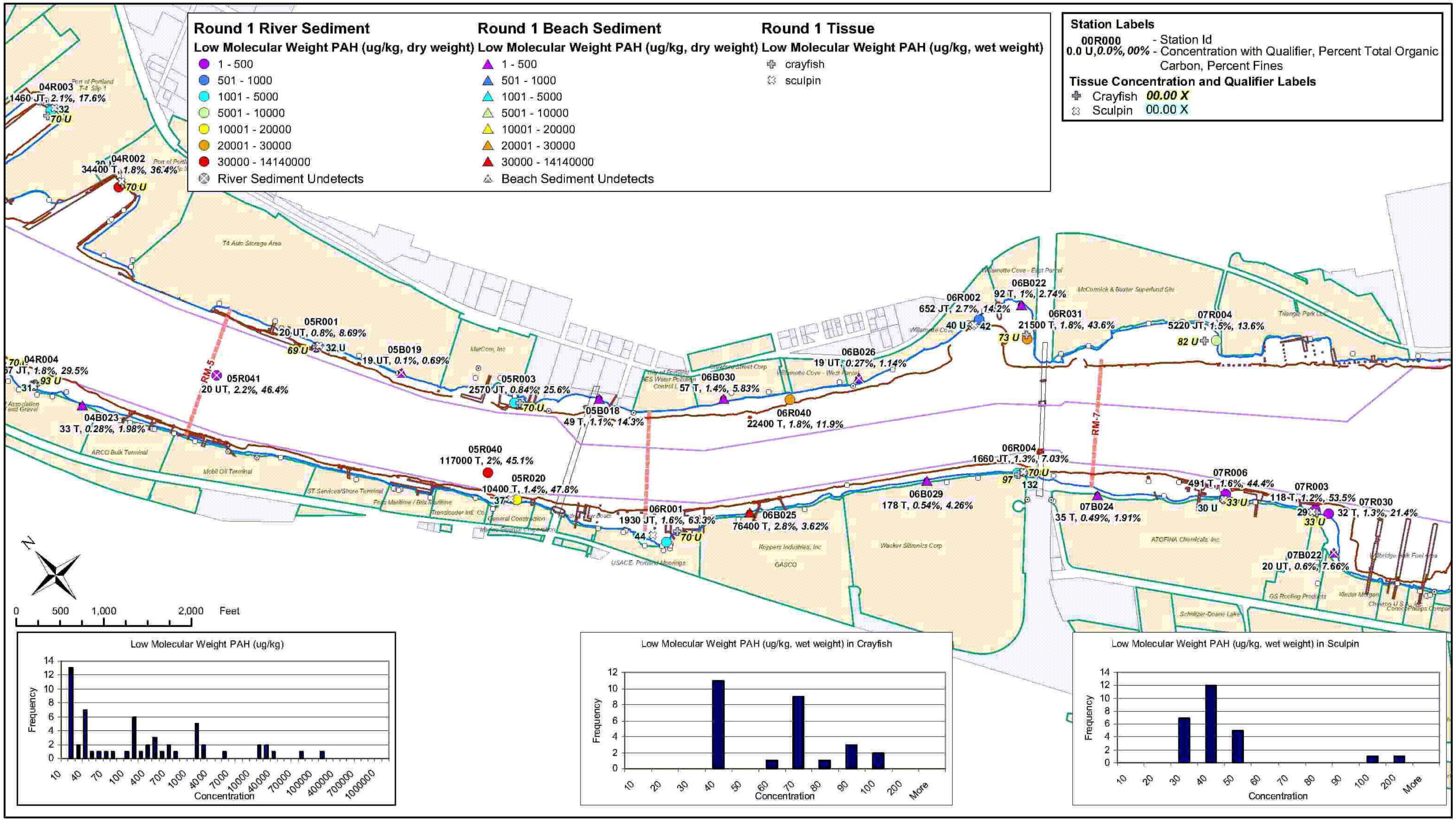
Figure 4-18a
Portland Harbor RI/FS
Round 1 Report
Low Molecular Weight PAH
Concentrations in
Surface Sediment,
Sculpin, and Crayfish

BZTO104(e)003493
ANC03493



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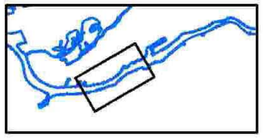

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Plot Date: 10/01/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks &
- RiverEdgePoly_2001
- Select Upland Properties
- Navigation Channel

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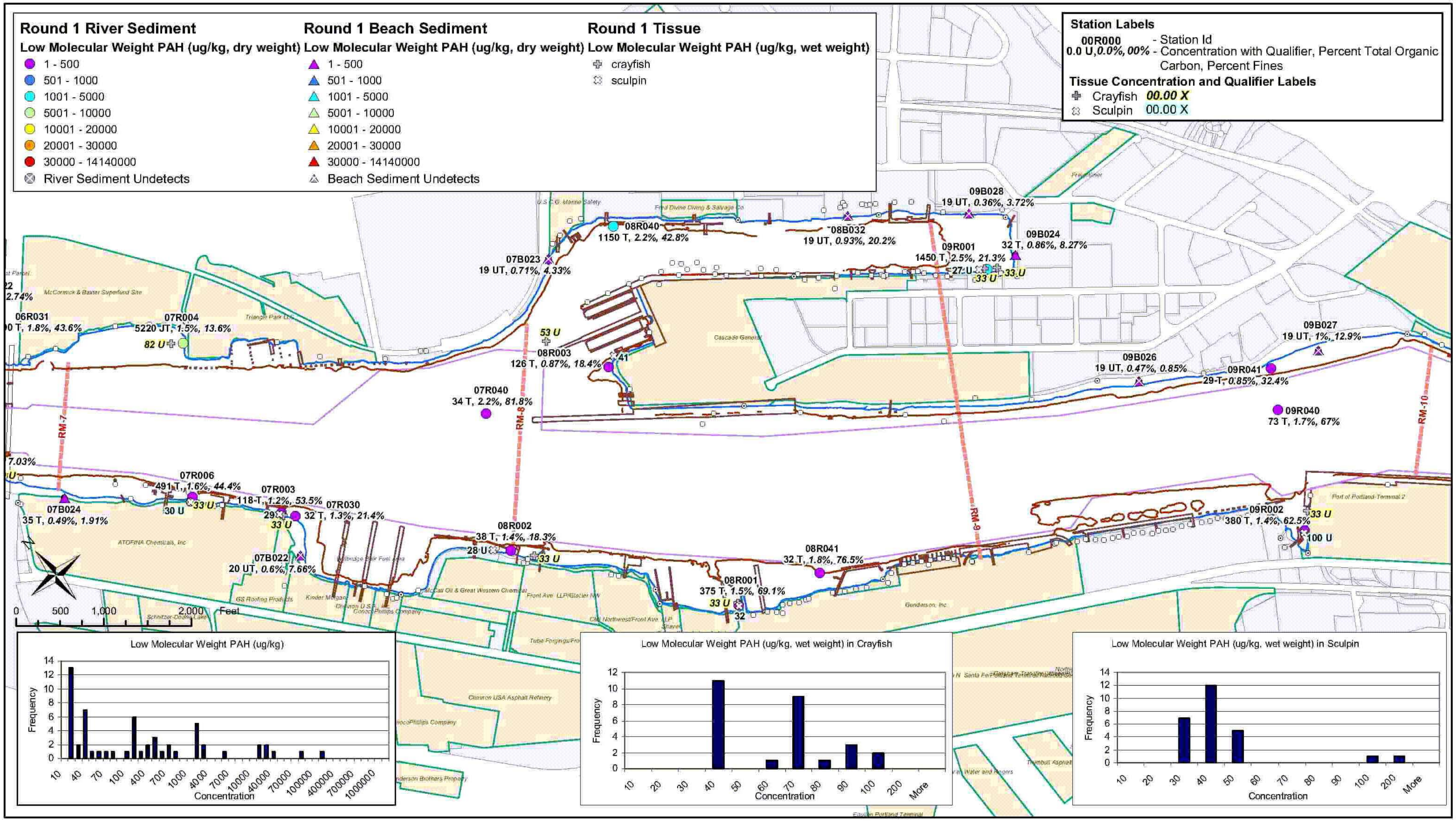
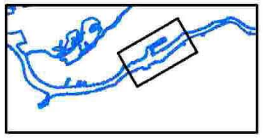
Figure 4-18b
Portland Harbor RI/FS
Round 1 Report
Low Molecular Weight PAH
Concentrations in
Surface Sediment,
Sculpin, and Crayfish

BZTO104(e)003494
ANC03494





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Plot Date: 10/01/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks &
- RiverEdgePoly_2001
- Select Upland Properties
- Navigation Channel

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Figure 4-18c
Portland Harbor RI/FS
Round 1 Report
Low Molecular Weight PAH Concentrations in Surface Sediment, Sculpin, and Crayfish

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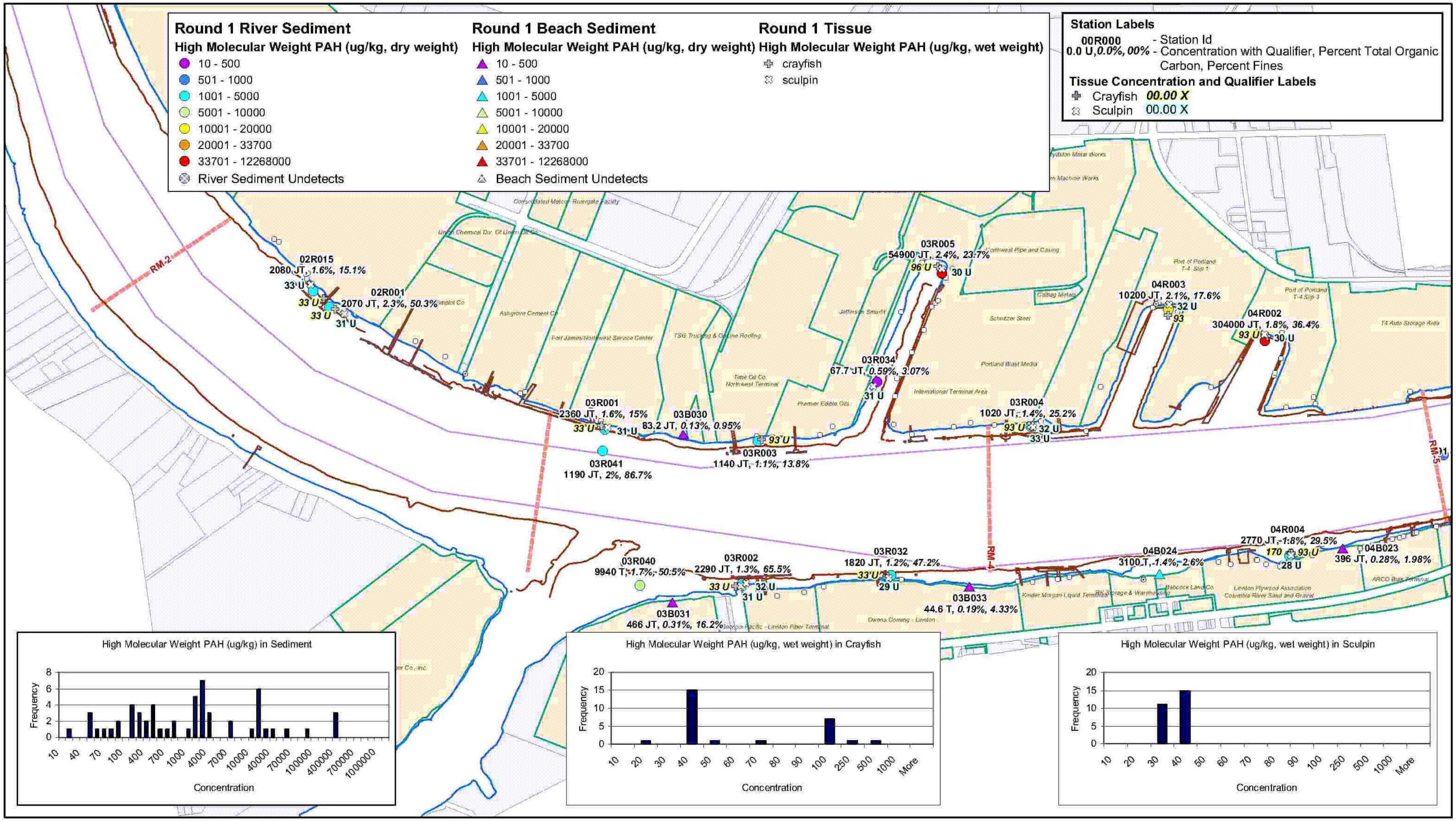
integral consulting inc.

BZTO104(e)003495
ANC03495



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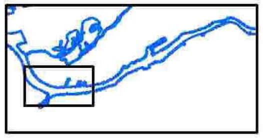

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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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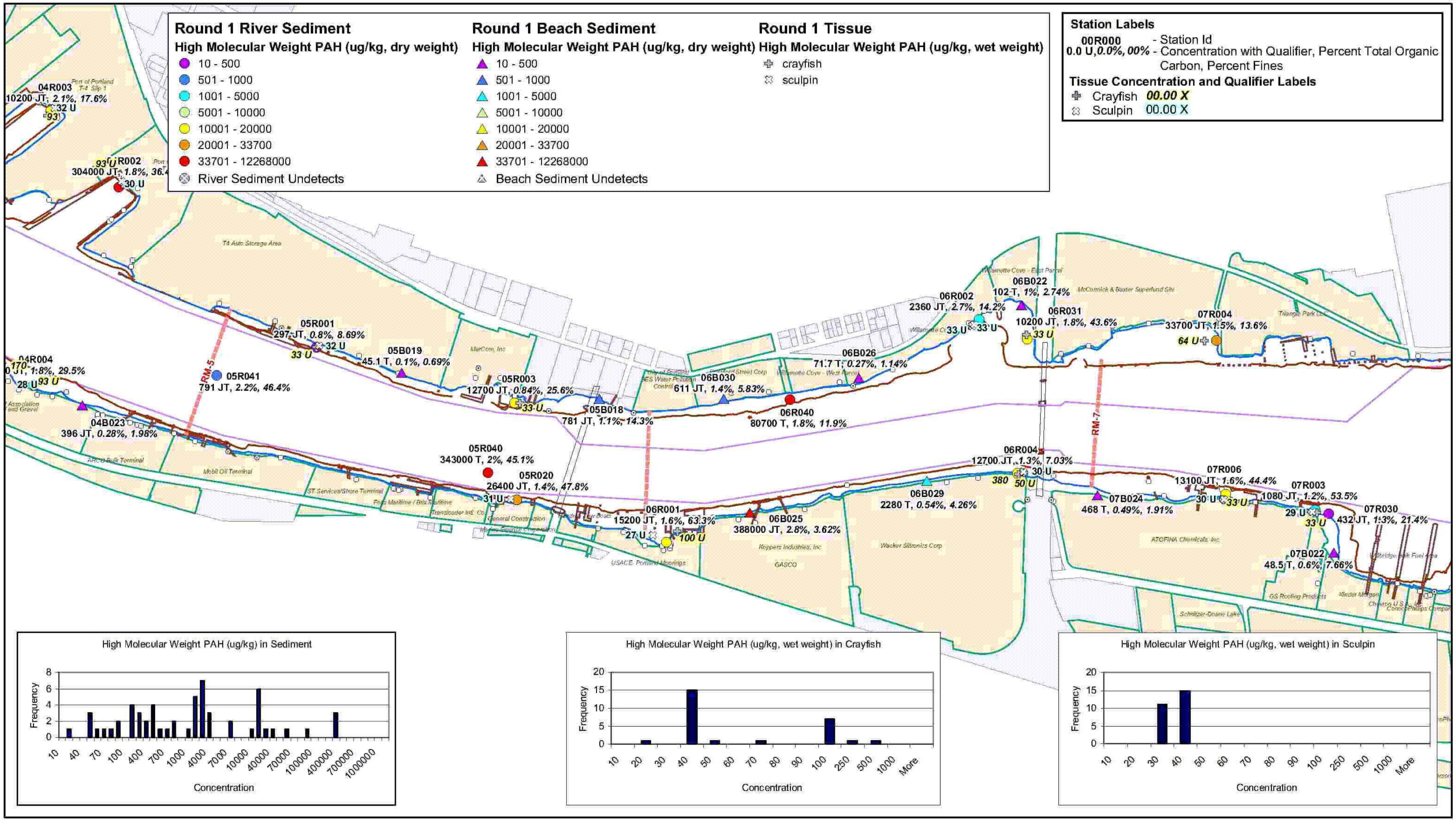
Figure 4-19a
Portland Harbor RI/FS
Round 1 Report
High Molecular Weight PAH Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003496
ANC03496



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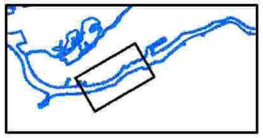

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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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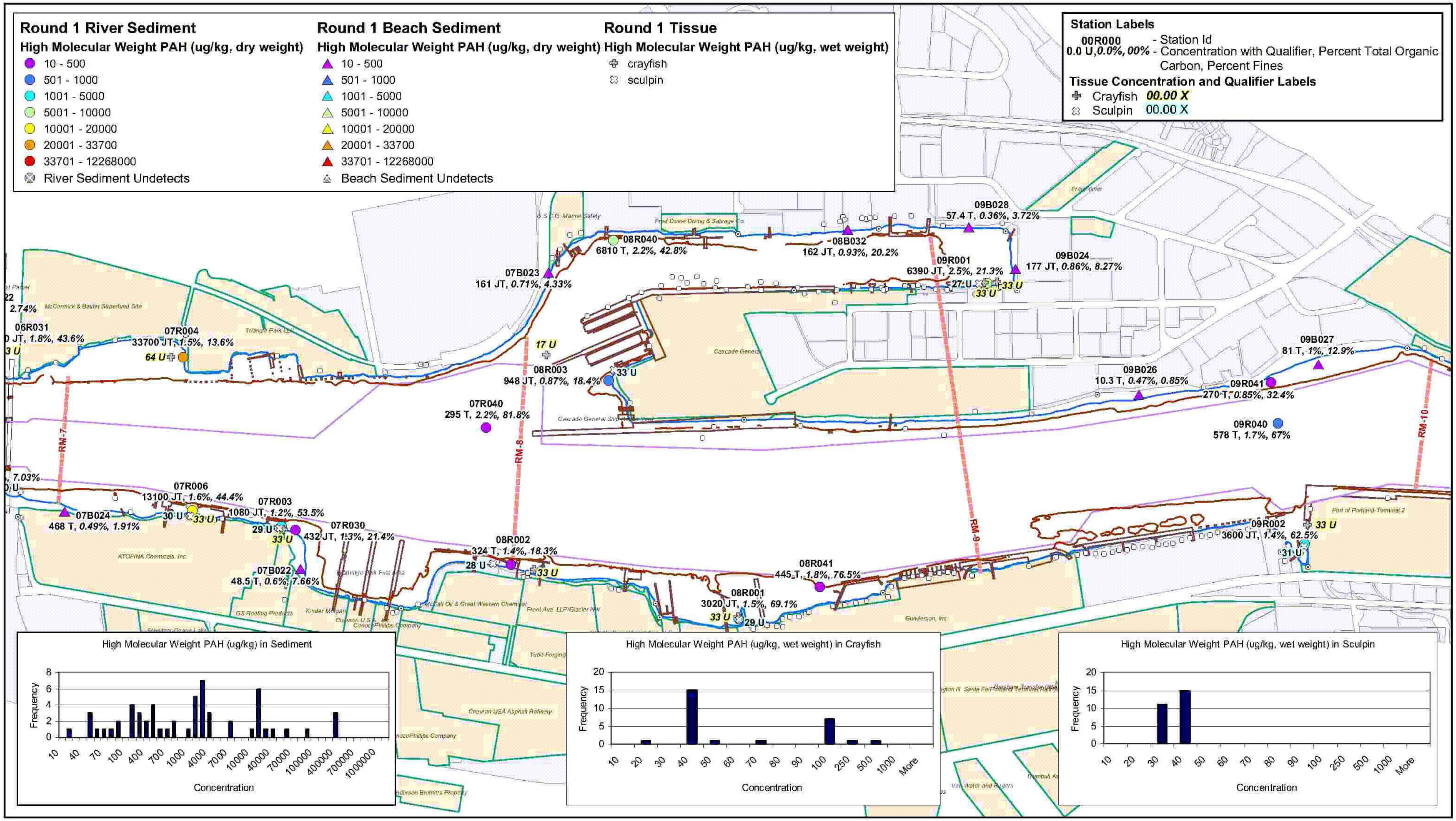
Figure 4-19b
Portland Harbor RI/FS
Round 1 Report
High Molecular Weight PAH
Concentrations in
Surface Sediment,
Sculpin, and Crayfish

ANC03497
BZTO104(e)003497



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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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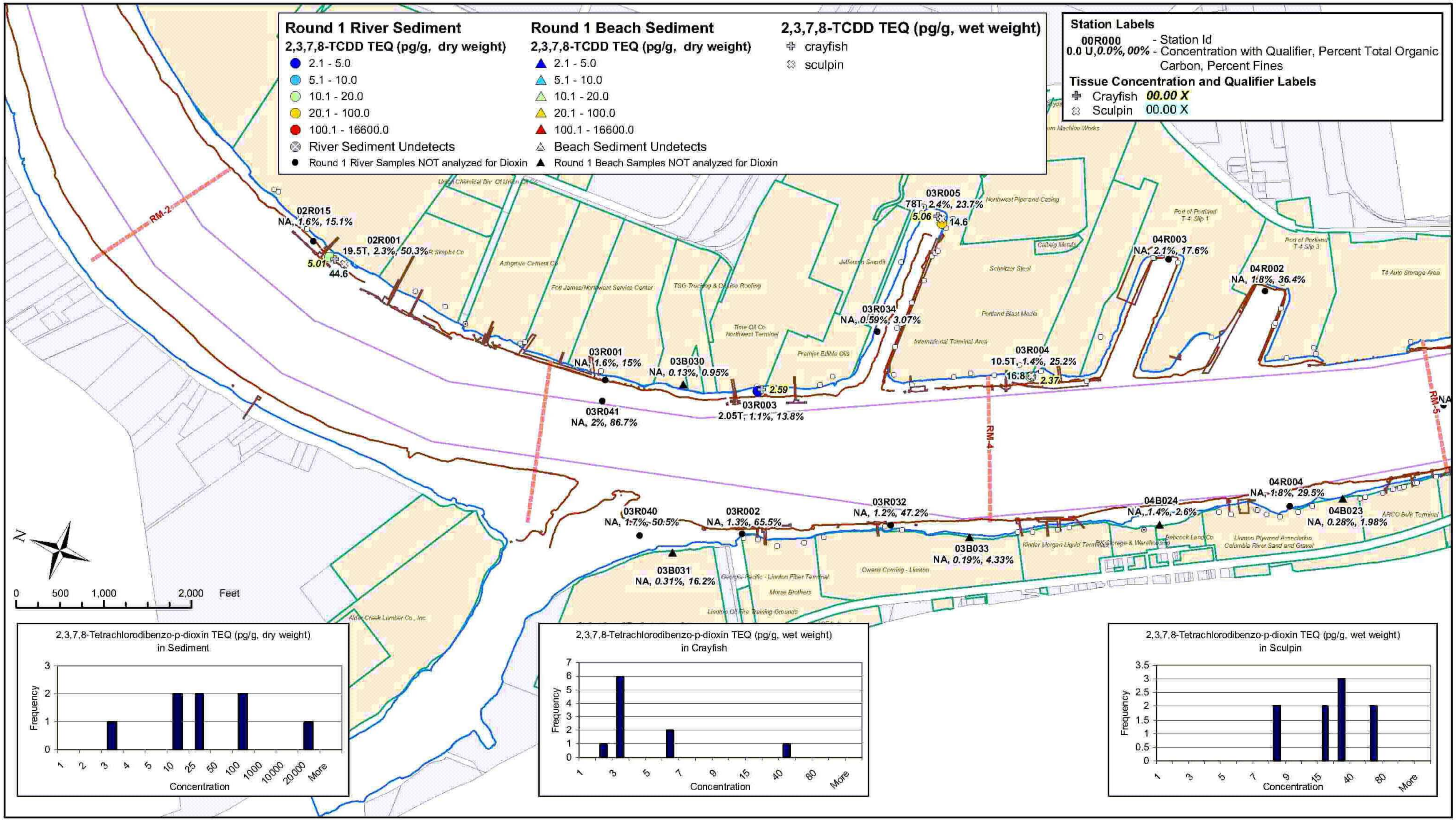
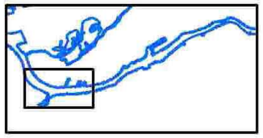
Figure 4-19c
Portland Harbor RI/FS
Round 1 Report
High Molecular Weight PAH Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003498
ANC03498





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Plot Date: 09/30/2004

Legend
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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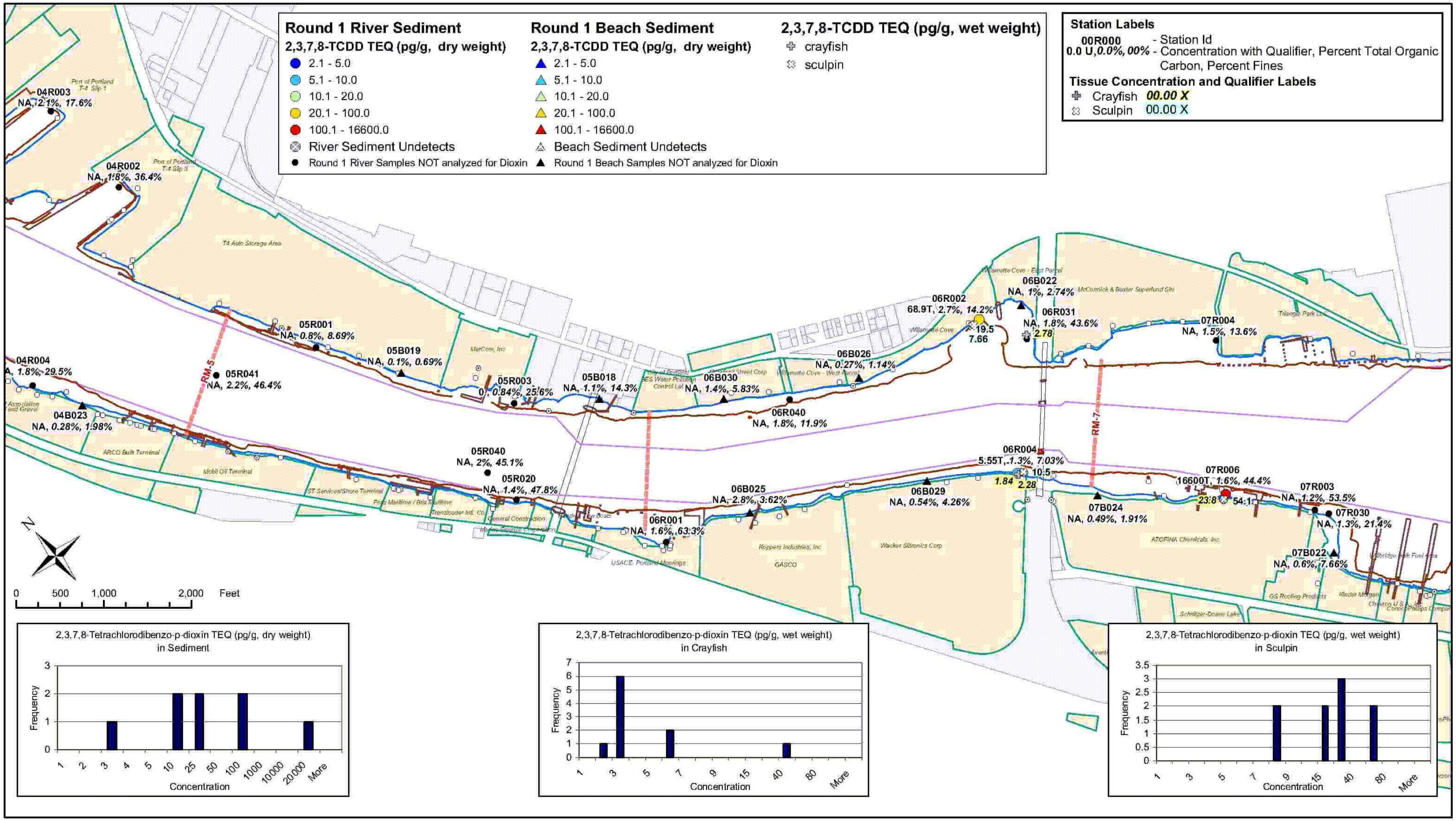
Figure 4-20a
Portland Harbor RI/FS
Round 1 Report
2,3,7,8-Tetrachlorodibenzo-p-dioxin TEQ
Concentrations in
Surface Sediment,
Sculpin, and Crayfish



LWG LOWER WILLAMETTE GROUP

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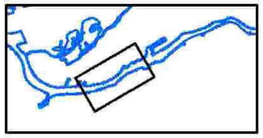

FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS .
Channel & Rivermiles: Developed from US Army Corps of Engineers information.
Bathymetric Information: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. (DEA) Dec. 2001/Jan. 2002 and July/Sept 2002.
River Edge: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
Docks & In-water Structures: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).
Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report PCBs.mxd)
Plot Date: 09/30/2004

Legend

- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- - 15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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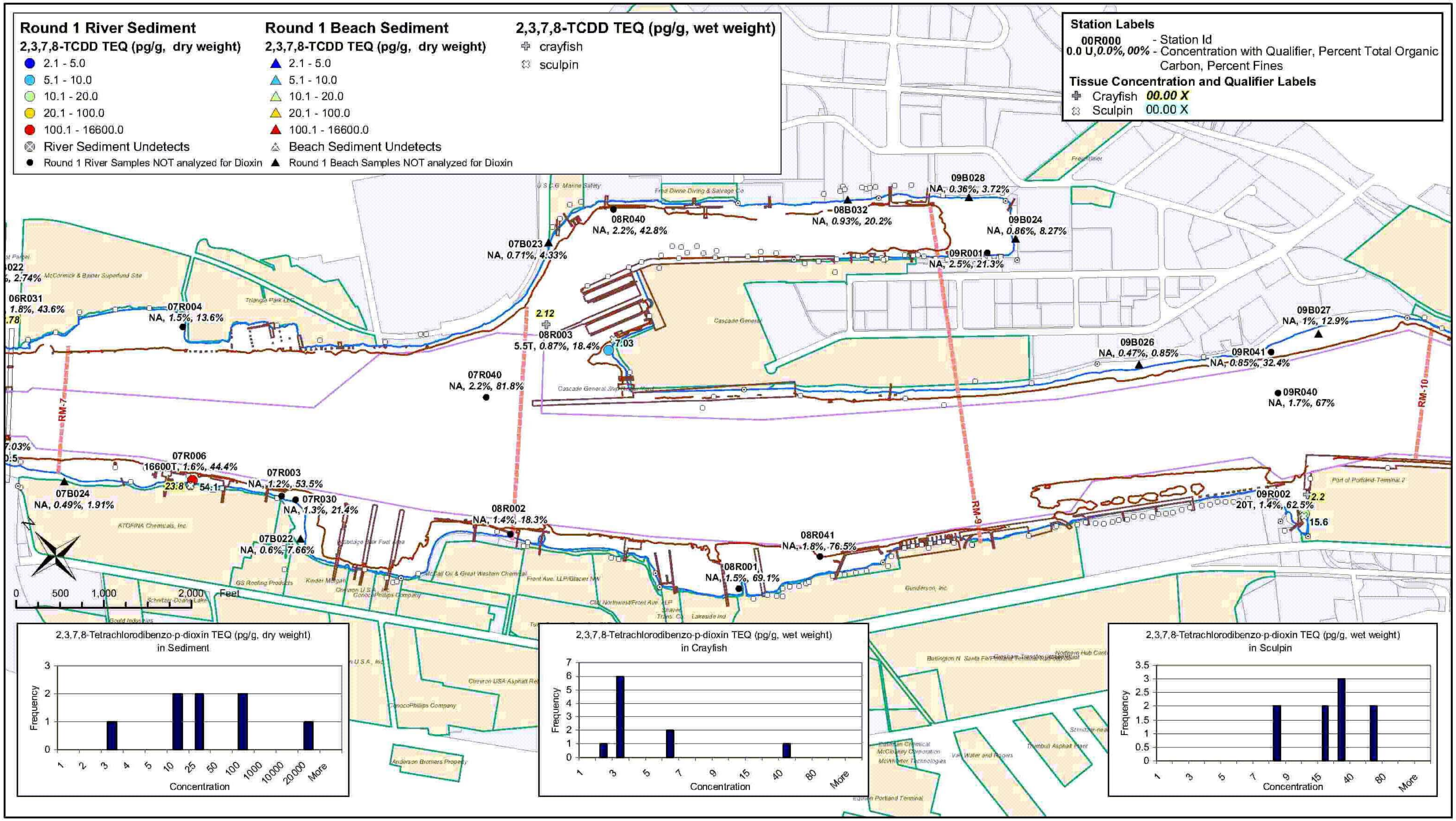
Figure 4-20b
Portland Harbor RI/FS
Round 1 Report
2,3,7,8-Tetrachlorodibenzo-p-dioxin TEQ Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003500
ANC03500



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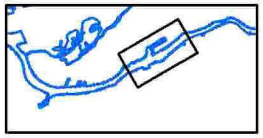

FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS.
Channel & Rivermiles: Developed from US Army Corps of Engineers information.
Bathymetric Information: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. (DEA) Dec, 2001/Jan, 2002 and July/Sept 2002.
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Docks & In-water Structures: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).
Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Sediment_Maps\Round 1 Report PCBs.mxd)
Plot Date: 09/30/2004

Legend

- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- -15 ft. Bathy Contour(-20 CRD)
- Bridges
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel

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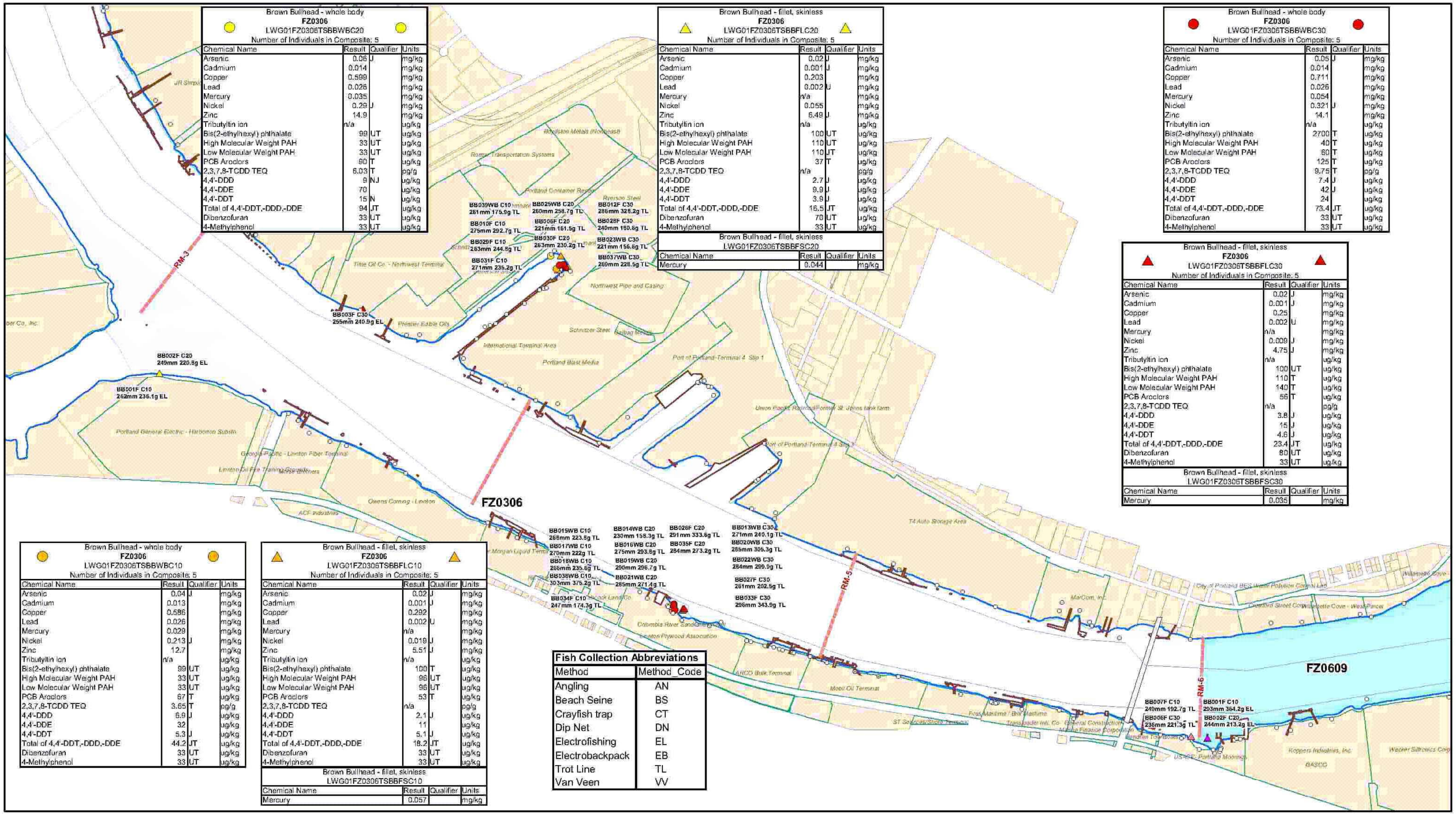
Figure 4-20c
Portland Harbor RI/FS
Round 1 Report
2,3,7,8-Tetrachlorodibenzo-p-dioxin TEQ Concentrations in Surface Sediment, Sculpin, and Crayfish

BZTO104(e)003501
ANC03501



Brown Bullhead - whole body FZ0306 LWG01FZ0306TSBBWBC20 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.06	J	mg/kg
Cadmium	0.014		mg/kg
Copper	0.599		mg/kg
Lead	0.026		mg/kg
Mercury	0.035		mg/kg
Nickel	0.29	J	mg/kg
Zinc	14.9		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	99	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	33	UT	ug/kg
PCB Aroclors	90	T	ug/kg
2,3,7,8-TCDD TEQ	6.03	T	pg/g
4,4'-DDD	9	NJ	ug/kg
4,4'-DDE	70		ug/kg
4,4'-DDT	15	N	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	94	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Brown Bullhead - fillet, skinless FZ0306 LWG01FZ0306TSBBFLC20 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.02	J	mg/kg
Cadmium	0.001	J	mg/kg
Copper	0.203		mg/kg
Lead	0.002	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.055		mg/kg
Zinc	6.49	J	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	100	UT	ug/kg
High Molecular Weight PAH	110	UT	ug/kg
Low Molecular Weight PAH	110	JT	ug/kg
PCB Aroclors	37	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	2.7	J	ug/kg
4,4'-DDE	9.9	J	ug/kg
4,4'-DDT	3.9	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	16.5	JT	ug/kg
Dibenzofuran	70	UT	ug/kg
4-Methylphenol	33	UT	ug/kg
Brown Bullhead - fillet, skinless LWG01FZ0306TSBBFSC20			
Chemical Name	Result	Qualifier	Units
Mercury	0.044		mg/kg

Brown Bullhead - whole body FZ0306 LWG01FZ0306TSBBWBC30 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.05	J	mg/kg
Cadmium	0.014		mg/kg
Copper	0.711		mg/kg
Lead	0.026		mg/kg
Mercury	0.054		mg/kg
Nickel	0.321	J	mg/kg
Zinc	14.1		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	2700	T	ug/kg
High Molecular Weight PAH	40	T	ug/kg
Low Molecular Weight PAH	60	T	ug/kg
PCB Aroclors	125	T	ug/kg
2,3,7,8-TCDD TEQ	9.75	T	pg/g
4,4'-DDD	7.4	J	ug/kg
4,4'-DDE	42	J	ug/kg
4,4'-DDT	24		ug/kg
Total of 4,4'-DDT,-DDD,-DDE	73.4	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Brown Bullhead - fillet, skinless FZ0306 LWG01FZ0306TSBBFLC30 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.02	J	mg/kg
Cadmium	0.001	J	mg/kg
Copper	0.25		mg/kg
Lead	0.002	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.009	J	mg/kg
Zinc	4.75	J	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	100	UT	ug/kg
High Molecular Weight PAH	110	T	ug/kg
Low Molecular Weight PAH	140	T	ug/kg
PCB Aroclors	56	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	3.8	J	ug/kg
4,4'-DDE	15	J	ug/kg
4,4'-DDT	4.6	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	23.4	JT	ug/kg
Dibenzofuran	80	UT	ug/kg
4-Methylphenol	33	UT	ug/kg
Brown Bullhead - fillet, skinless LWG01FZ0306TSBBFSC30			
Chemical Name	Result	Qualifier	Units
Mercury	0.035		mg/kg

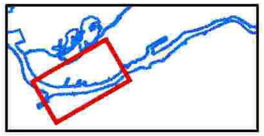
Brown Bullhead - whole body FZ0306 LWG01FZ0306TSBBWBC10 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.04	J	mg/kg
Cadmium	0.013		mg/kg
Copper	0.586		mg/kg
Lead	0.026		mg/kg
Mercury	0.029		mg/kg
Nickel	0.213	J	mg/kg
Zinc	12.7		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	99	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	33	UT	ug/kg
PCB Aroclors	67	T	ug/kg
2,3,7,8-TCDD TEQ	3.65	T	pg/g
4,4'-DDD	6.9	J	ug/kg
4,4'-DDE	32		ug/kg
4,4'-DDT	5.3	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	44.2	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Brown Bullhead - fillet, skinless FZ0306 LWG01FZ0306TSBBFLC10 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.02	J	mg/kg
Cadmium	0.001	J	mg/kg
Copper	0.292		mg/kg
Lead	0.002	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.019	J	mg/kg
Zinc	5.51	J	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	100	T	ug/kg
High Molecular Weight PAH	96	UT	ug/kg
Low Molecular Weight PAH	96	UT	ug/kg
PCB Aroclors	53	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	2.1	J	ug/kg
4,4'-DDE	11		ug/kg
4,4'-DDT	5.1	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	18.2	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg
Brown Bullhead - fillet, skinless LWG01FZ0306TSBBFSC10			
Chemical Name	Result	Qualifier	Units
Mercury	0.057		mg/kg

Fish Collection Abbreviations	
Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG LOWER WILLAMETTE GROUP

integral consulting inc.



FEATURE SOURCES:
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Docks & In-water Structures: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps TissuePM.mxd)
Plot Date: 10/01/2004

Human Health Fish Zones

- FZ0306
- FZ0609
- City of Portland Outfall
- Private Outfalls
- Abandoned City of Portland Outfalls
- Docks & Structures
- Navigation Channel
- River Miles
- River Edge
- Select Upland Properties

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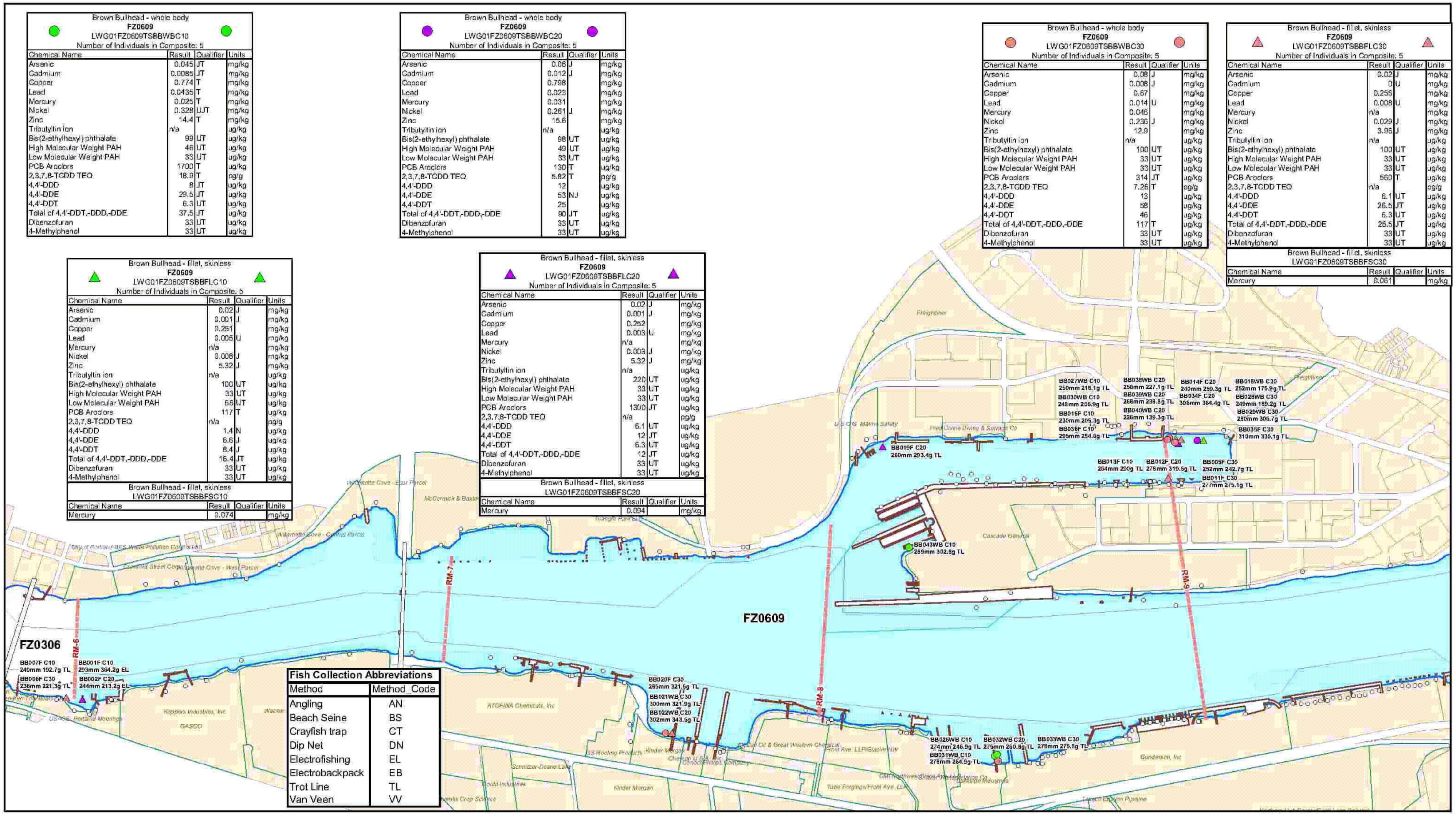
Figure 4-21a
Portland Harbor RI/FS
Round 1 Report
Brown Bullhead
Results

BZT0104(e)003502
ANC03502



Brown Bullhead - whole body
FZ0609
LWG01FZ0609TSBBWBC10
Number of Individuals in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.045	JT	mg/kg
Cadmium	0.0085	JT	mg/kg
Copper	0.774	T	mg/kg
Lead	0.0435	T	mg/kg
Mercury	0.025	T	mg/kg
Nickel	0.328	UJT	mg/kg
Zinc	14.4	T	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	99	UT	ug/kg
High Molecular Weight PAH	46	UT	ug/kg
Low Molecular Weight PAH	33	UT	ug/kg
PCB Aroclors	1700	T	ug/kg
2,3,7,8-TCDD TEQ	18.9	T	pg/g
4,4'-DDD	8	JT	ug/kg
4,4'-DDE	29.5	JT	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	37.5	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Brown Bullhead - whole body
FZ0609
LWG01FZ0609TSBBWBC20
Number of Individuals in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.06	J	mg/kg
Cadmium	0.012	J	mg/kg
Copper	0.798		mg/kg
Lead	0.023		mg/kg
Mercury	0.031		mg/kg
Nickel	0.261	J	mg/kg
Zinc	15.6		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	98	UT	ug/kg
High Molecular Weight PAH	49	UT	ug/kg
Low Molecular Weight PAH	33	UT	ug/kg
PCB Aroclors	130	T	ug/kg
2,3,7,8-TCDD TEQ	5.82	T	pg/g
4,4'-DDD	12		ug/kg
4,4'-DDE	53	NJ	ug/kg
4,4'-DDT	25		ug/kg
Total of 4,4'-DDT,-DDD,-DDE	90	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Brown Bullhead - whole body
FZ0609
LWG01FZ0609TSBBWBC30
Number of Individuals in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.08	J	mg/kg
Cadmium	0.008	J	mg/kg
Copper	0.67		mg/kg
Lead	0.014	U	mg/kg
Mercury	0.046		mg/kg
Nickel	0.236	J	mg/kg
Zinc	12.9		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	100	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	33	UT	ug/kg
PCB Aroclors	314	JT	ug/kg
2,3,7,8-TCDD TEQ	7.26	T	pg/g
4,4'-DDD	13		ug/kg
4,4'-DDE	58		ug/kg
4,4'-DDT	46		ug/kg
Total of 4,4'-DDT,-DDD,-DDE	117	T	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Brown Bullhead - fillet, skinless
FZ0609
LWG01FZ0609TSBBFLC30
Number of Individuals in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.02	J	mg/kg
Cadmium	0	U	mg/kg
Copper	0.256		mg/kg
Lead	0.008	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.029	J	mg/kg
Zinc	3.96	J	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	100	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	33	UT	ug/kg
PCB Aroclors	560	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	6.1	UT	ug/kg
4,4'-DDE	26.5	JT	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	26.5	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Brown Bullhead - fillet, skinless
LWG01FZ0609TSBBFSC30

Chemical Name	Result	Qualifier	Units
Mercury	0.061		mg/kg

Brown Bullhead - fillet, skinless
FZ0609
LWG01FZ0609TSBBFLC10
Number of Individuals in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.02	J	mg/kg
Cadmium	0.001	J	mg/kg
Copper	0.251		mg/kg
Lead	0.005	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.008	J	mg/kg
Zinc	5.32	J	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	100	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	66	UT	ug/kg
PCB Aroclors	117	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	1.4	N	ug/kg
4,4'-DDE	6.6	J	ug/kg
4,4'-DDT	8.4	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	16.4	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Brown Bullhead - fillet, skinless
LWG01FZ0609TSBBFSC10

Chemical Name	Result	Qualifier	Units
Mercury	0.074		mg/kg

Brown Bullhead - fillet, skinless
FZ0609
LWG01FZ0609TSBBFLC20
Number of Individuals in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.02	J	mg/kg
Cadmium	0.001	J	mg/kg
Copper	0.252		mg/kg
Lead	0.003	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.003	J	mg/kg
Zinc	5.32	J	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	220	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	33	UT	ug/kg
PCB Aroclors	1300	JT	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	6.1	UT	ug/kg
4,4'-DDE	12	JT	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	12	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

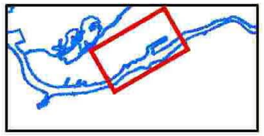
Brown Bullhead - fillet, skinless
LWG01FZ0609TSBBFSC20

Chemical Name	Result	Qualifier	Units
Mercury	0.094		mg/kg

Fish Collection Abbreviations

Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG Lower Willamette Group
integral consulting inc.



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Docks & In-water Structures: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps TissuePM.mxd)
Plot Date: 10/01/2004

Human Health Fish Zones

- FZ0306
- FZ0609
- City of Portland Outfall
- Private Outfalls
- Abandoned City of Portland Outfalls
- Docks & Structures
- Navigation Channel
- River Miles
- River Edge
- Select Upland Properties

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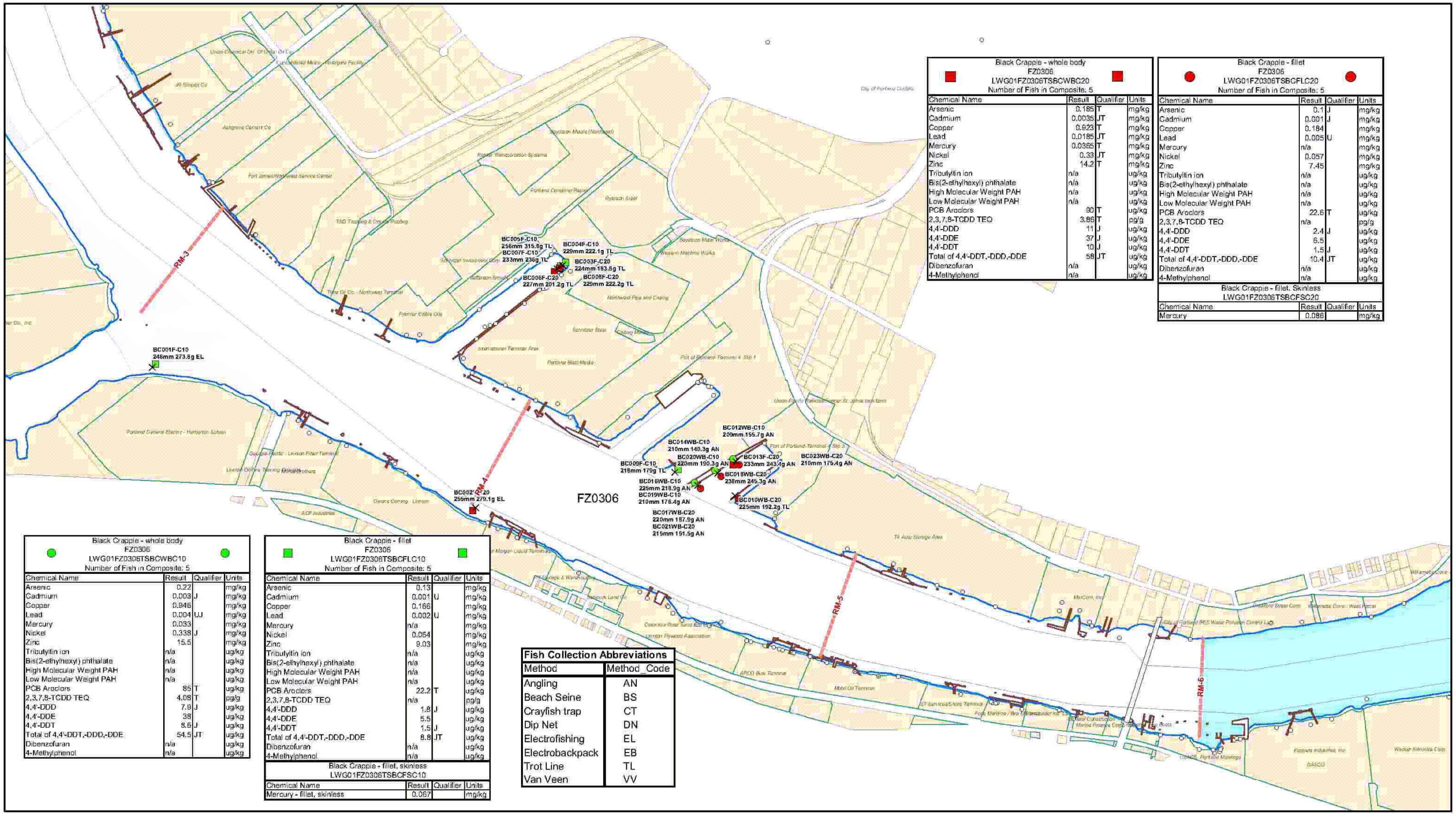
Figure 4-21b
Portland Harbor RI/FS
Round 1 Data Report
Brown Bullhead
Results

ANC03503
BZTO104(e)003503



Black Crappie - whole body FZ0306 LWG01FZ0306TSBCWBC20 Number of Fish in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.185	T	mg/kg
Cadmium	0.0035	JT	mg/kg
Copper	0.923	T	mg/kg
Lead	0.0185	JT	mg/kg
Mercury	0.0365	T	mg/kg
Nickel	0.33	JT	mg/kg
Zinc	14.2	T	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	90	T	ug/kg
2,3,7,8-TCDD TEQ	3.86	T	pg/g
4,4'-DDD	11	J	ug/kg
4,4'-DDE	37	J	ug/kg
4,4'-DDT	10	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	58	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Black Crappie - fillet FZ0306 LWG01FZ0306TSBCFLC20 Number of Fish in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.1	J	mg/kg
Cadmium	0.001	J	mg/kg
Copper	0.184		mg/kg
Lead	0.005	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.057		mg/kg
Zinc	7.45		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	22.6	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	2.4	J	ug/kg
4,4'-DDE	6.5		ug/kg
4,4'-DDT	1.5	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	10.4	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg
Black Crappie - fillet. Skinless LWG01FZ0306TSBCFSC20			
Chemical Name	Result	Qualifier	Units
Mercury	0.086		mg/kg

Black Crappie - whole body FZ0306 LWG01FZ0306TSBCWBC10 Number of Fish in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.22		mg/kg
Cadmium	0.003	J	mg/kg
Copper	0.946		mg/kg
Lead	0.004	UJ	mg/kg
Mercury	0.033		mg/kg
Nickel	0.338	J	mg/kg
Zinc	15.5		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	85	T	ug/kg
2,3,7,8-TCDD TEQ	4.08	T	pg/g
4,4'-DDD	7.9	J	ug/kg
4,4'-DDE	38		ug/kg
4,4'-DDT	8.6	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	54.5	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Black Crappie - fillet FZ0306 LWG01FZ0306TSBCFLC10 Number of Fish in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.13		mg/kg
Cadmium	0.001	U	mg/kg
Copper	0.166		mg/kg
Lead	0.002	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.064		mg/kg
Zinc	9.03		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	22.2	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	1.8	J	ug/kg
4,4'-DDE	5.5		ug/kg
4,4'-DDT	1.5	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	8.8	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg
Black Crappie - fillet, skinless LWG01FZ0306TSBCFSC10			
Chemical Name	Result	Qualifier	Units
Mercury - fillet, skinless	0.067		mg/kg

Fish Collection Abbreviations	
Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG
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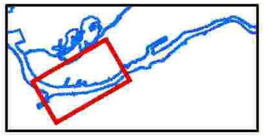

FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS .
Channel & River miles: Developed from US Army Corps of Engineers information.
Bathymetric Information: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. (DEA) Dec. 2001/Jan. 2002 and July/Sept 2002.
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Docks & In-water Structures: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
Round 1 Sampling Locations and Results: ???

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps Tissue BC.mxd)
09/16/2004

Legend

HHRA Fish Zones

- FZ0306
- FZ0609
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- Navigation Channel
- NearShoreZone
- Docks & Structures
- River Edge
- Select Upland Properties

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Figure 4-22a
Portland Harbor RI/FS
Round 1 Report
Black Crappie
Results

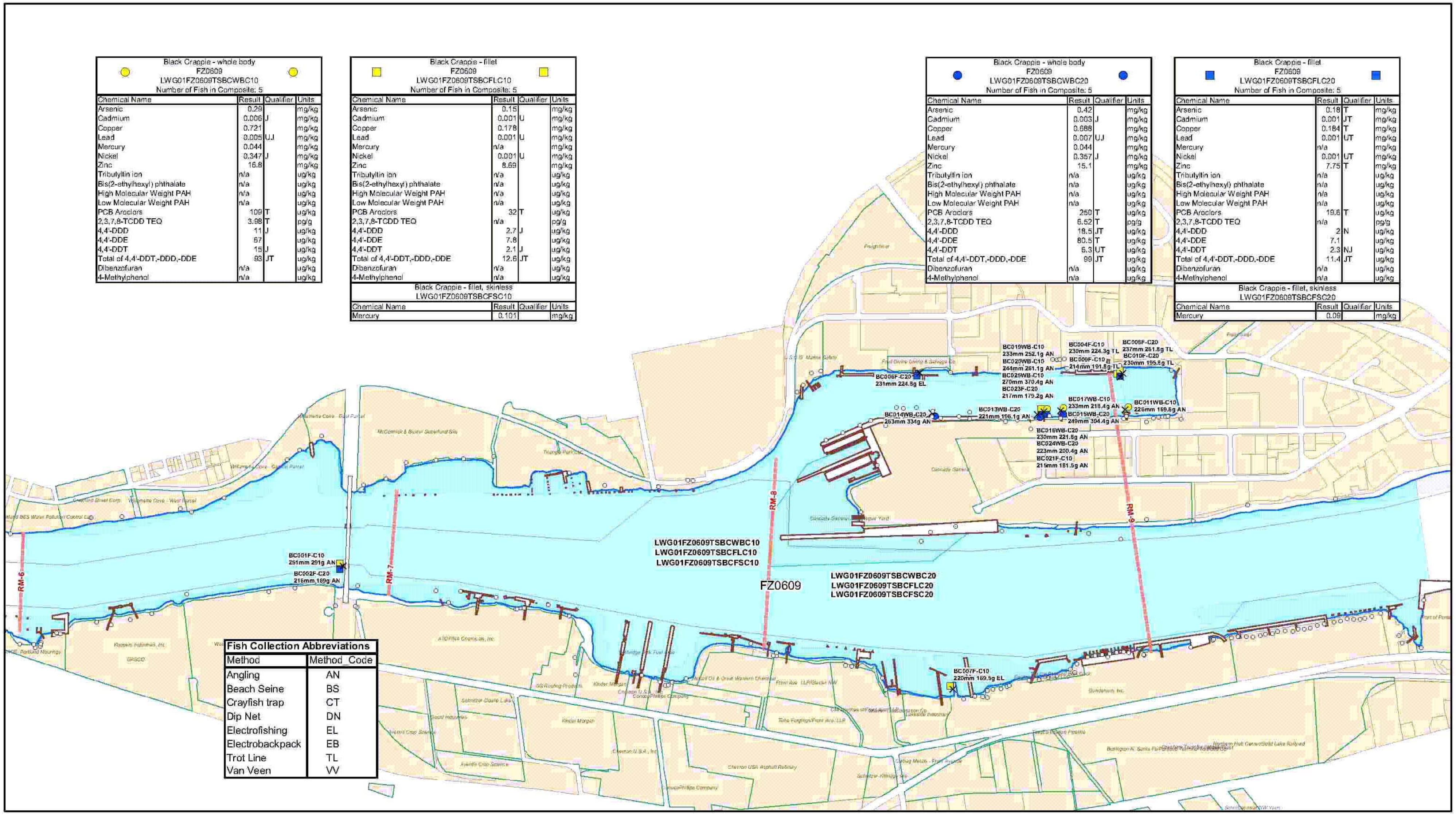
BZTO104(e)003504
ANC03504

Black Crappie - whole body FZ0609 LWG01FZ0609TSBCWBC10 Number of Fish in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.29		mg/kg
Cadmium	0.006	J	mg/kg
Copper	0.721		mg/kg
Lead	0.005	UJ	mg/kg
Mercury	0.044		mg/kg
Nickel	0.347	J	mg/kg
Zinc	16.8		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	109	T	ug/kg
2,3,7,8-TCDD TEQ	3.98	T	pg/g
4,4'-DDD	11	J	ug/kg
4,4'-DDE	67		ug/kg
4,4'-DDT	15	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	93	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Black Crappie - fillet FZ0609 LWG01FZ0609TSBCFLC10 Number of Fish in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.15		mg/kg
Cadmium	0.001	U	mg/kg
Copper	0.178		mg/kg
Lead	0.001	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.001	U	mg/kg
Zinc	8.69		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	32	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	2.7	J	ug/kg
4,4'-DDE	7.8		ug/kg
4,4'-DDT	2.1	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	12.6	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg
Black Crappie - fillet, skinless LWG01FZ0609TSBCFSC10			
Chemical Name	Result	Qualifier	Units
Mercury	0.101		mg/kg

Black Crappie - whole body FZ0609 LWG01FZ0609TSBCWBC20 Number of Fish in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.42		mg/kg
Cadmium	0.003	J	mg/kg
Copper	0.688		mg/kg
Lead	0.007	UJ	mg/kg
Mercury	0.044		mg/kg
Nickel	0.357	J	mg/kg
Zinc	15.1		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	250	T	ug/kg
2,3,7,8-TCDD TEQ	6.52	T	pg/g
4,4'-DDD	18.5	JT	ug/kg
4,4'-DDE	80.5	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	99	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Black Crappie - fillet FZ0609 LWG01FZ0609TSBCFLC20 Number of Fish in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.18	T	mg/kg
Cadmium	0.001	JT	mg/kg
Copper	0.184	T	mg/kg
Lead	0.001	UT	mg/kg
Mercury	n/a		mg/kg
Nickel	0.001	UT	mg/kg
Zinc	7.75	T	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	19.6	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	2	N	ug/kg
4,4'-DDE	7.1		ug/kg
4,4'-DDT	2.3	NJ	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	11.4	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg
Black Crappie - fillet, skinless LWG01FZ0609TSBCFSC20			
Chemical Name	Result	Qualifier	Units
Mercury	0.09		mg/kg



Fish Collection Abbreviations	
Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

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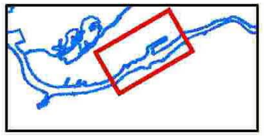

FEATURE SOURCES:
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Round 1 Sampling Locations and Results: ???

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps Tissue BC.mxd)
09/16/2004

Legend

HHRA Fish Zones

- FZ0306
- FZ0609
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- River Mile
- Navigation Channel
- NearShoreZone
- Docks & Structures
- River Edge
- Select Upland Properties

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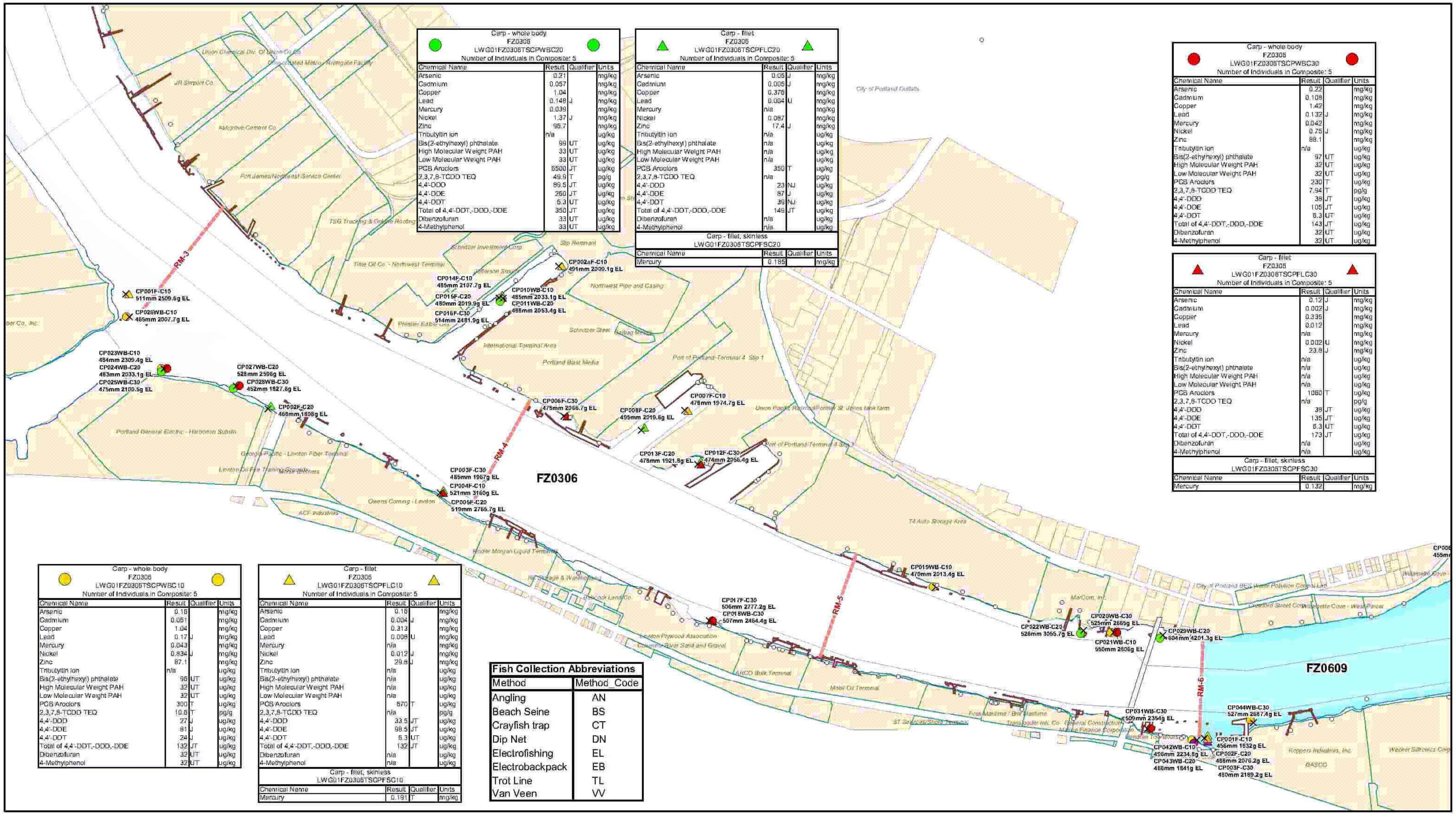
Figure 4-22b
Portland Harbor RI/FS
Round 1 Report
Black Crappie
Results

BZTO104(e)003505
ANC03505



Carp - whole body FZ0306 LWG01FZ0306TSCPWBC20 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.21		mg/kg
Cadmium	0.057		mg/kg
Copper	1.04		mg/kg
Lead	0.148	J	mg/kg
Mercury	0.039		mg/kg
Nickel	1.37	J	mg/kg
Zinc	96.7		mg/kg
Tributyltin Ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	99	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	33	UT	ug/kg
PCB Aroclors	6500	JT	ug/kg
2,3,7,8-TCDD TEQ	49.9	T	pg/g
4,4'-DDD	89.5	JT	ug/kg
4,4'-DDE	260	JT	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	350	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Carp - fillet FZ0306 LWG01FZ0306TSCPFLC20 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.05	J	mg/kg
Cadmium	0.005	J	mg/kg
Copper	0.376		mg/kg
Lead	0.004	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.087		mg/kg
Zinc	17.4	J	mg/kg
Tributyltin Ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	350	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	23	NJ	ug/kg
4,4'-DDE	87	J	ug/kg
4,4'-DDT	39	NJ	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	149	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg
Carp - fillet, skinless LWG01FZ0306TSCPFSC20			
Chemical Name	Result	Qualifier	Units
Mercury	0.185		mg/kg

Carp - whole body FZ0306 LWG01FZ0306TSCPWBC30 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.22		mg/kg
Cadmium	0.108		mg/kg
Copper	1.42		mg/kg
Lead	0.132	J	mg/kg
Mercury	0.042		mg/kg
Nickel	0.75	J	mg/kg
Zinc	88.1		mg/kg
Tributyltin Ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	97	UT	ug/kg
High Molecular Weight PAH	32	UT	ug/kg
Low Molecular Weight PAH	32	UT	ug/kg
PCB Aroclors	230	T	ug/kg
2,3,7,8-TCDD TEQ	7.94	T	pg/g
4,4'-DDD	38	JT	ug/kg
4,4'-DDE	105	JT	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	143	JT	ug/kg
Dibenzofuran	32	UT	ug/kg
4-Methylphenol	32	UT	ug/kg

Carp - fillet FZ0306 LWG01FZ0306TSCPFLC30 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.12	J	mg/kg
Cadmium	0.002	J	mg/kg
Copper	0.335		mg/kg
Lead	0.012		mg/kg
Mercury	n/a		mg/kg
Nickel	0.002	U	mg/kg
Zinc	23.8	J	mg/kg
Tributyltin Ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	1060	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	38	JT	ug/kg
4,4'-DDE	135	JT	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	173	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg
Carp - fillet, skinless LWG01FZ0306TSCPFSC30			
Chemical Name	Result	Qualifier	Units
Mercury	0.132		mg/kg

Carp - whole body FZ0306 LWG01FZ0306TSCPWBC10 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.16		mg/kg
Cadmium	0.061		mg/kg
Copper	1.04		mg/kg
Lead	0.17	J	mg/kg
Mercury	0.043		mg/kg
Nickel	0.834	J	mg/kg
Zinc	87.1		mg/kg
Tributyltin Ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	96	UT	ug/kg
High Molecular Weight PAH	32	UT	ug/kg
Low Molecular Weight PAH	32	UT	ug/kg
PCB Aroclors	300	T	ug/kg
2,3,7,8-TCDD TEQ	10.6	T	pg/g
4,4'-DDD	27	J	ug/kg
4,4'-DDE	81	J	ug/kg
4,4'-DDT	24	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	132	JT	ug/kg
Dibenzofuran	32	UT	ug/kg
4-Methylphenol	32	UT	ug/kg

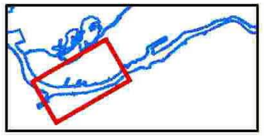
Carp - fillet FZ0306 LWG01FZ0306TSCPFLC10 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.16		mg/kg
Cadmium	0.004	J	mg/kg
Copper	0.313		mg/kg
Lead	0.008	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.012	J	mg/kg
Zinc	29.8	J	mg/kg
Tributyltin Ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	670	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	33.5	JT	ug/kg
4,4'-DDE	98.5	JT	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	132	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg
Carp - fillet, skinless LWG01FZ0306TSCPFSC10			
Chemical Name	Result	Qualifier	Units
Mercury	0.191	T	mg/kg

Fish Collection Abbreviations

Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG Lower Willamette Group

integral consulting inc



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Docks & In-water Structures: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps TissueCP.mxd)
Plot Date: 09/16/2004

HHRA Fish Zone

- FZ0306
- FZ0609
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel
- River Miles

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Figure 4-23a
Portland Harbor RI/FS
Round 1 Report
Carp
Results

BZTO104(e)003506
ANC03506

Carp - whole body FZ0609 LWG01FZ0609TSCPWBC10 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.14	J	mg/kg
Cadmium	0.048		mg/kg
Copper	1.28		mg/kg
Lead	0.202	J	mg/kg
Mercury	0.039		mg/kg
Nickel	0.569	J	mg/kg
Zinc	112		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	94	UT	ug/kg
High Molecular Weight PAH	31	UT	ug/kg
Low Molecular Weight PAH	222	JT	ug/kg
PCB Aroclors	890	T	ug/kg
2,3,7,8-TCDD TEQ	10.6	T	pg/g
4,4'-DDD	22.6	JT	ug/kg
4,4'-DDE	145	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	168	JT	ug/kg
Dibenzofuran	31	UT	ug/kg
4-Methylphenol	31	UT	ug/kg

Carp - fillet FZ0609 LWG01FZ0609TSCPFLC10 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.1	J	mg/kg
Cadmium	0.002	J	mg/kg
Copper	0.497		mg/kg
Lead	0.057		mg/kg
Mercury	n/a		mg/kg
Nickel	0.023	J	mg/kg
Zinc	19.8		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	1200	JT	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	26.5	JT	ug/kg
4,4'-DDE	73	JT	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	99.5	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Carp - fillet, skinless LWG01FZ0609TSCPFSC10			
Chemical Name	Result	Qualifier	Units
Mercury	0.098		mg/kg

Carp - whole body FZ0609 LWG01FZ0609TSCPWBC20 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.14	J	mg/kg
Cadmium	0.068		mg/kg
Copper	1.15		mg/kg
Lead	0.121	J	mg/kg
Mercury	0.029		mg/kg
Nickel	0.545	J	mg/kg
Zinc	102		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	96	UT	ug/kg
High Molecular Weight PAH	32	UT	ug/kg
Low Molecular Weight PAH	32	UT	ug/kg
PCB Aroclors	1010	T	ug/kg
2,3,7,8-TCDD TEQ	15.7	T	pg/g
4,4'-DDD	57.5	JT	ug/kg
4,4'-DDE	130	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	188	JT	ug/kg
Dibenzofuran	32	UT	ug/kg
4-Methylphenol	32	UT	ug/kg

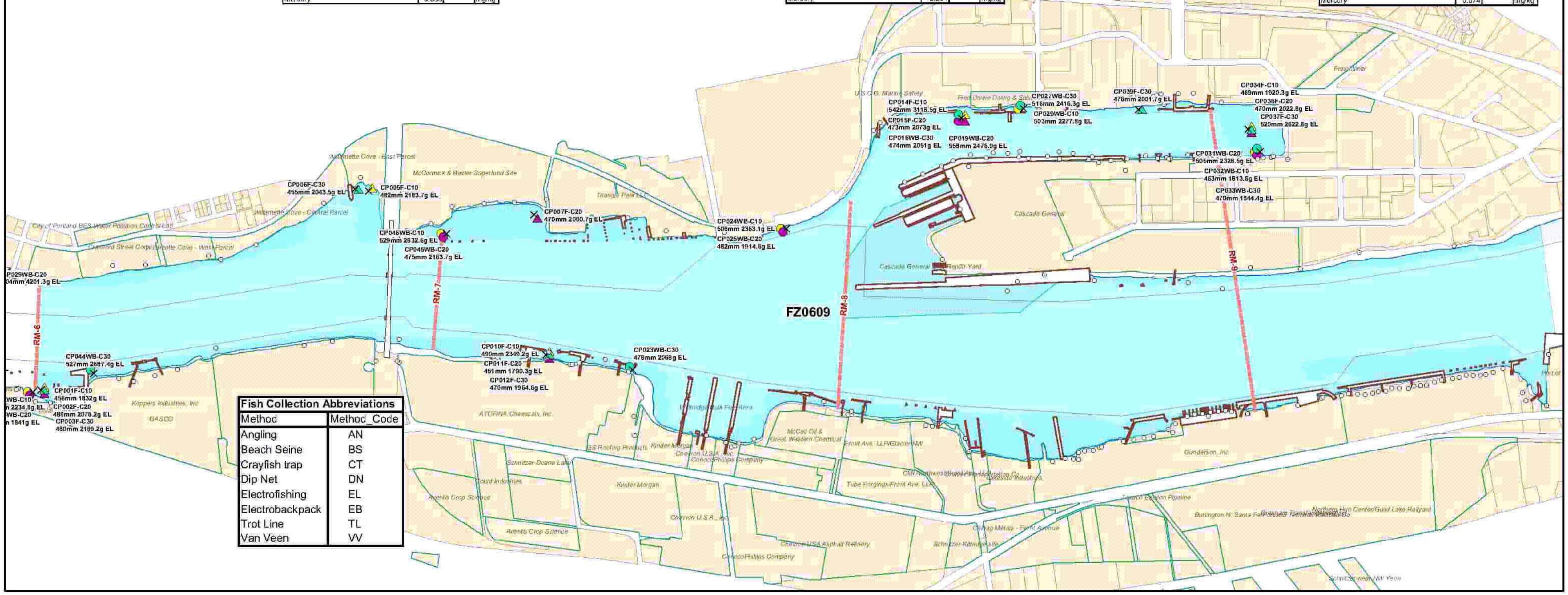
Carp - fillet FZ0609 LWG01FZ0609TSCPFLC20 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.08	JT	mg/kg
Cadmium	0.0035	JT	mg/kg
Copper	0.427	T	mg/kg
Lead	0.004	UT	mg/kg
Mercury	n/a		mg/kg
Nickel	0.057	T	mg/kg
Zinc	24.6	JT	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	390	JT	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	63.5	T	ug/kg
4,4'-DDE	91.5	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	155	T	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Carp - fillet, skinless LWG01FZ0609TSCPFSC20			
Chemical Name	Result	Qualifier	Units
Mercury	0.084		mg/kg

Carp – whole body FZ0609 LWG01FZ0609TSCPWBC30 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.125	JT	mg/kg
Cadmium	0.0705	T	mg/kg
Copper	1.05	T	mg/kg
Lead	0.133	JT	mg/kg
Mercury	0.047	T	mg/kg
Nickel	0.401	JT	mg/kg
Zinc	110	T	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	98	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	111	T	ug/kg
PCB Aroclors	1100	T	ug/kg
2,3,7,8-TCDD TEQ	13.3	T	pg/g
4,4'-DDD	44	JT	ug/kg
4,4'-DDE	91.5	JT	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	136	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Carp - fillet FZ0609 LWG01FZ0609TSCPFLC30 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.07	J	mg/kg
Cadmium	0.009	J	mg/kg
Copper	0.458		mg/kg
Lead	0.004	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.04	J	mg/kg
Zinc	24.5		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	1200	JT	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	43.5	JT	ug/kg
4,4'-DDE	83.5	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	127	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Carp – fillet, skinless LWG01FZ0609TSCPFSC30			
Chemical Name	Result	Qualifier	Units
Mercury	0.074		mg/kg



Fish Collection Abbreviations	
Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG LOWER WILLAMETTE GROUP

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FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS.
Channel & River miles: Developed from US Army Corps of Engineers information.
Bathymetric Information: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. (DEA) Dec. 2001/Jan. 2002 and July/Sept 2002.
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Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps TissueCP.mxd)
Plot Date: 09/16/2004

HHRA Fish Zone
- FZ0306
- FZ0609
- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- Docks & Structures
- River Edge
- Select Upland Properties
- Navigation Channel
- River Miles

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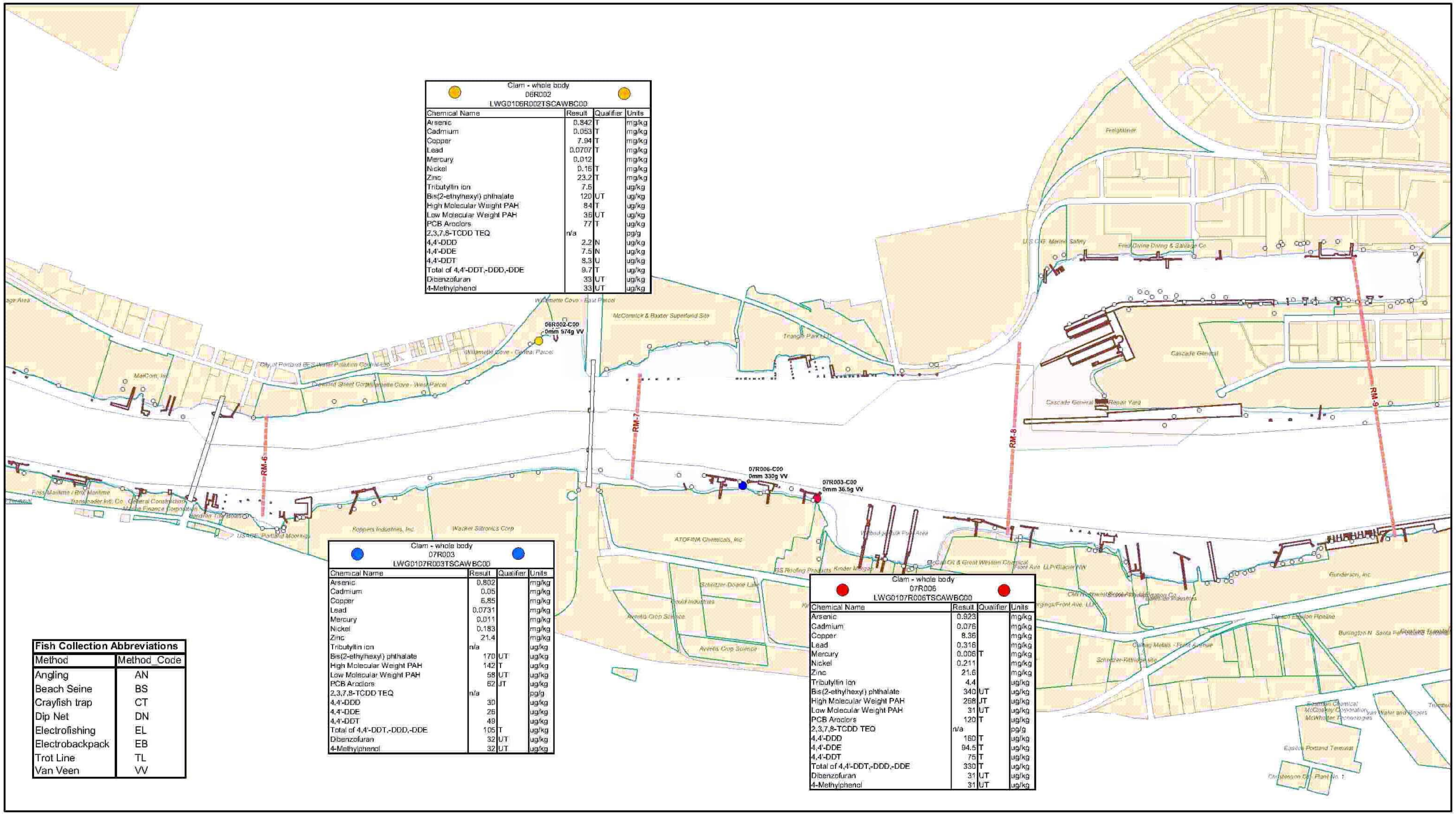
Figure 4-23b
Portland Harbor RI/FS
Round 1 Report
Carp
Results

BZTO104(e)003507
ANC03507



Clam - whole body 06R002 LWG0106R002TSCAWBC00			
Chemical Name	Result	Qualifier	Units
Arsenic	0.842	T	mg/kg
Cadmium	0.053	T	mg/kg
Copper	7.94	T	mg/kg
Lead	0.0707	T	mg/kg
Mercury	0.012		mg/kg
Nickel	0.16	T	mg/kg
Zinc	23.2	T	mg/kg
Tributyltin ion	7.6		ug/kg
Bis(2-ethylhexyl) phthalate	120	UT	ug/kg
High Molecular Weight PAH	84	T	ug/kg
Low Molecular Weight PAH	36	UT	ug/kg
PCB Aroclors	77	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	2.2	N	ug/kg
4,4'-DDE	7.5	N	ug/kg
4,4'-DDT	8.3	U	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	9.7	T	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Clam - whole body 07R003 LWG0107R003TSCAWBC00			
Chemical Name	Result	Qualifier	Units
Arsenic	0.802		mg/kg
Cadmium	0.05		mg/kg
Copper	6.85		mg/kg
Lead	0.0731		mg/kg
Mercury	0.011		mg/kg
Nickel	0.183		mg/kg
Zinc	21.4		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	170	UT	ug/kg
High Molecular Weight PAH	142	T	ug/kg
Low Molecular Weight PAH	58	UT	ug/kg
PCB Aroclors	62	JT	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	30		ug/kg
4,4'-DDE	26		ug/kg
4,4'-DDT	49		ug/kg
Total of 4,4'-DDT,-DDD,-DDE	105	T	ug/kg
Dibenzofuran	32	UT	ug/kg
4-Methylphenol	32	UT	ug/kg

Clam - whole body 07R006 LWG0107R006TSCAWBC00			
Chemical Name	Result	Qualifier	Units
Arsenic	0.923		mg/kg
Cadmium	0.076		mg/kg
Copper	8.36		mg/kg
Lead	0.316		mg/kg
Mercury	0.006	T	mg/kg
Nickel	0.211		mg/kg
Zinc	21.6		mg/kg
Tributyltin ion	4.4		ug/kg
Bis(2-ethylhexyl) phthalate	340	UT	ug/kg
High Molecular Weight PAH	258	JT	ug/kg
Low Molecular Weight PAH	31	UT	ug/kg
PCB Aroclors	120	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	160	T	ug/kg
4,4'-DDE	94.5	T	ug/kg
4,4'-DDT	75	T	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	330	T	ug/kg
Dibenzofuran	31	UT	ug/kg
4-Methylphenol	31	UT	ug/kg

Fish Collection Abbreviations	
Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

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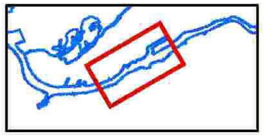

FEATURE SOURCES:
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Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps TissueJC.mxd)
Plot Date: 09/16/2004

- City of Portland Outfall
- Abandoned City of Portland Outfalls
- Private Outfalls
- Docks & Structures
- River Edge
- Navigation Channel
- River Miles
- Select Upland Properties

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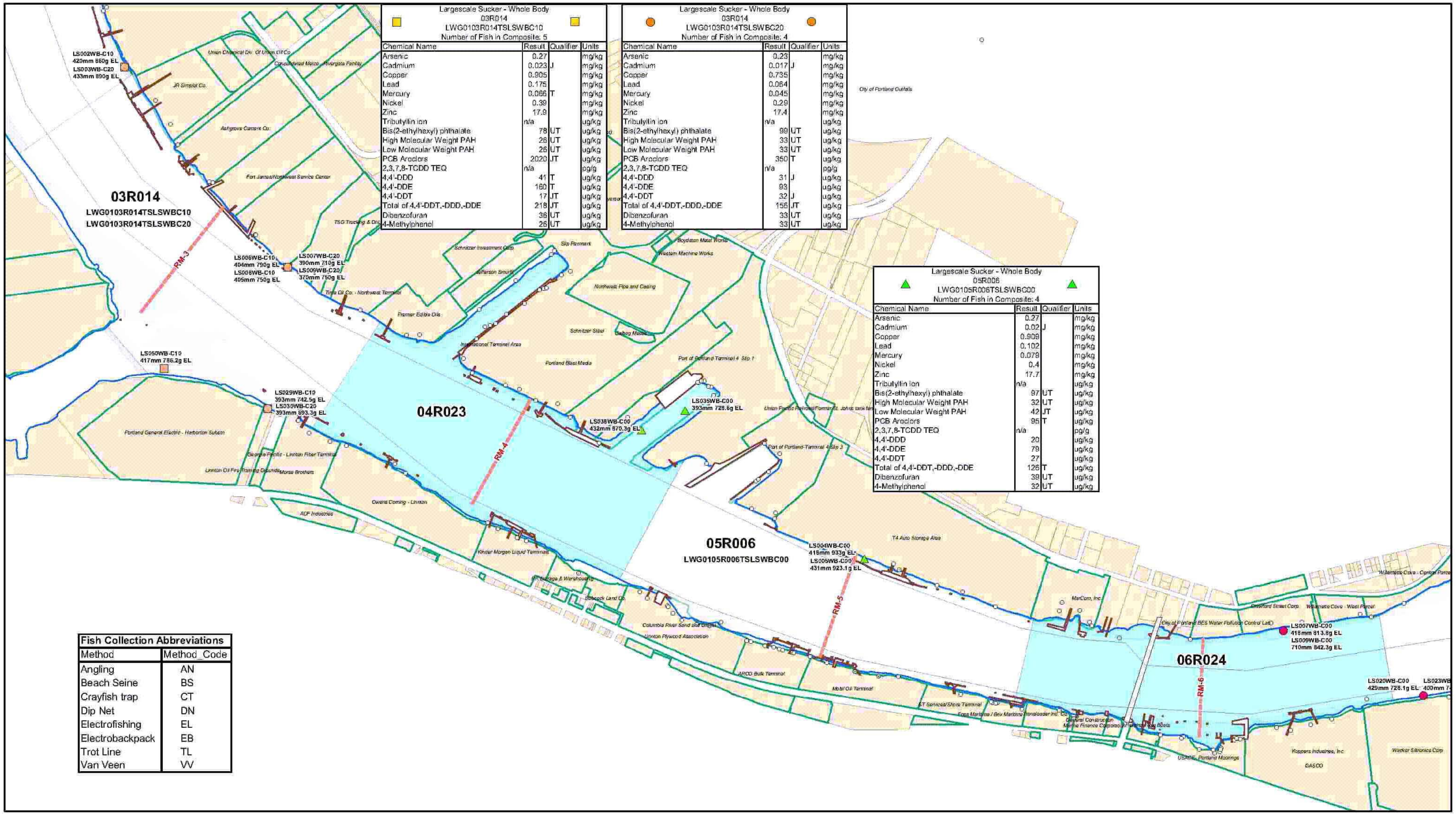
Figure 4-24
Portland Harbor RI/FS
Round 1 Report
Clams
Results

ANC03508
BZTO104(e)003508



Largescale Sucker - Whole Body 03R014 LWG0103R014TSLSWBC10 Number of Fish in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.27		mg/kg
Cadmium	0.023	J	mg/kg
Copper	0.905		mg/kg
Lead	0.175		mg/kg
Mercury	0.066	T	mg/kg
Nickel	0.39		mg/kg
Zinc	17.9		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	78	UT	ug/kg
High Molecular Weight PAH	26	UT	ug/kg
Low Molecular Weight PAH	26	UT	ug/kg
PCB Aroclors	2020	JT	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	41	T	ug/kg
4,4'-DDE	160	T	ug/kg
4,4'-DDT	17	JT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	218	JT	ug/kg
Dibenzofuran	36	UT	ug/kg
4-Methylphenol	26	UT	ug/kg

Largescale Sucker - Whole Body 03R014 LWG0103R014TSLSWBC20 Number of Fish in Composite: 4			
Chemical Name	Result	Qualifier	Units
Arsenic	0.23		mg/kg
Cadmium	0.017	J	mg/kg
Copper	0.735		mg/kg
Lead	0.064		mg/kg
Mercury	0.045		mg/kg
Nickel	0.29		mg/kg
Zinc	17.4		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	99	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	33	UT	ug/kg
PCB Aroclors	350	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	31	J	ug/kg
4,4'-DDE	93		ug/kg
4,4'-DDT	32	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	156	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Largescale Sucker - Whole Body 05R006 LWG0105R006TSLSWBC00 Number of Fish in Composite: 4			
Chemical Name	Result	Qualifier	Units
Arsenic	0.27		mg/kg
Cadmium	0.02	J	mg/kg
Copper	0.909		mg/kg
Lead	0.102		mg/kg
Mercury	0.079		mg/kg
Nickel	0.4		mg/kg
Zinc	17.7		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	97	UT	ug/kg
High Molecular Weight PAH	32	UT	ug/kg
Low Molecular Weight PAH	42	JT	ug/kg
PCB Aroclors	95	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	20		ug/kg
4,4'-DDE	79		ug/kg
4,4'-DDT	27		ug/kg
Total of 4,4'-DDT,-DDD,-DDE	126	T	ug/kg
Dibenzofuran	39	UT	ug/kg
4-Methylphenol	32	UT	ug/kg

Fish Collection Abbreviations	
Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG Lower Willamette Group

integral consulting inc

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Round 1 Sampling Locations and Results: ???

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps Tissue.mxd)
09/16/2004

ERA Fish Zone
03R014
04R023
05R006
06R024
07R009
08R010
08R032
09R006

River Mile
Navigation Channel
NearShoreZone
Docks & Structures
River Edge
Select Upland Properties

Private Outfalls
City of Portland Outfall
Abandoned City of Portland Outfalls

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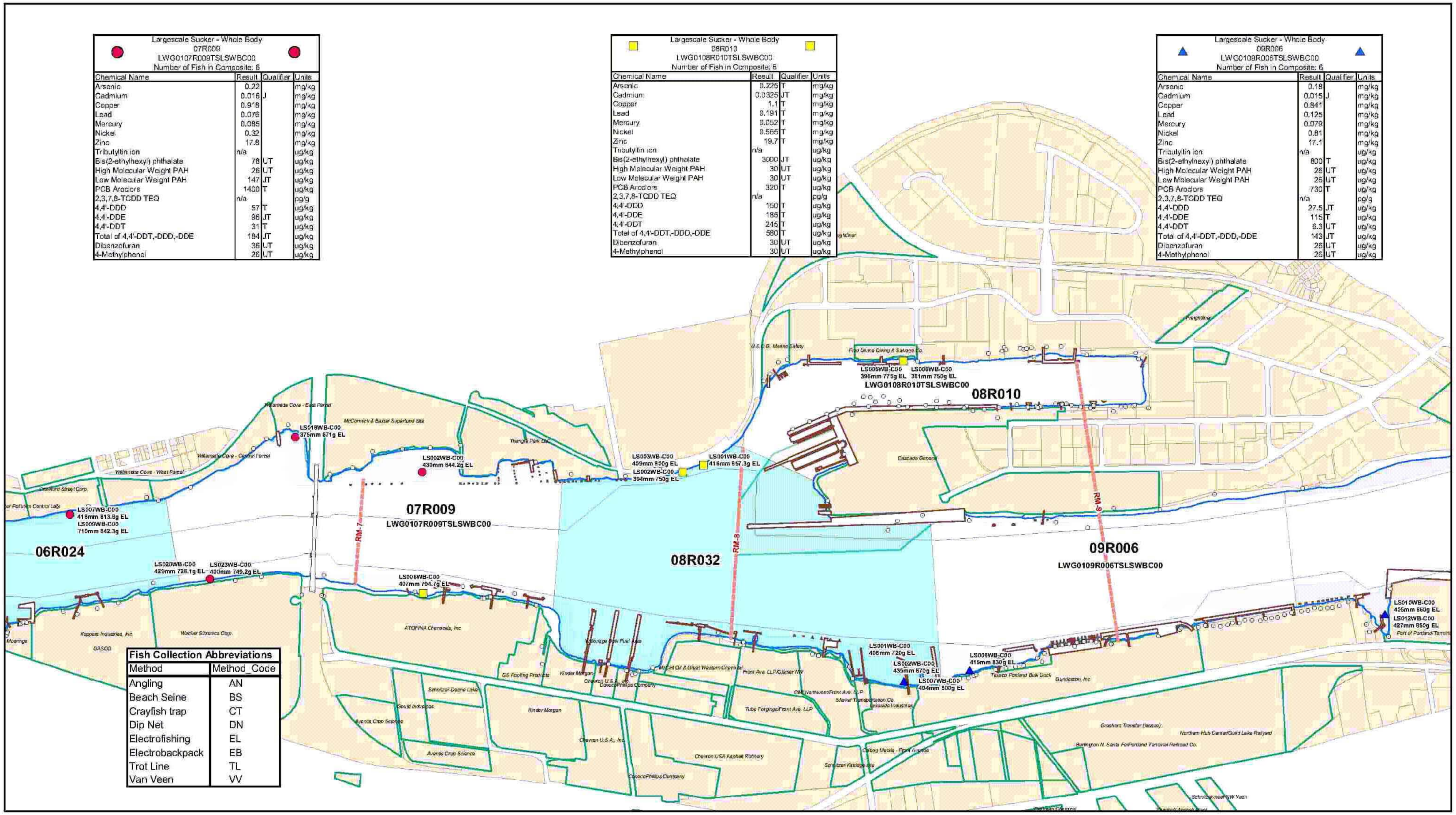
Figure 4-25a
Portland Harbor RI/FS
Round 1 Data Report
Largescale Sucker
Results

BZTO104(e)003509
ANC03509

Largescale Sucker - Whole Body 07R009 LWG0107R009TSLSWBC00 Number of Fish in Composite: 6			
Chemical Name	Result	Qualifier	Units
Arsenic	0.22		mg/kg
Cadmium	0.016	J	mg/kg
Copper	0.918		mg/kg
Lead	0.076		mg/kg
Mercury	0.085		mg/kg
Nickel	0.32		mg/kg
Zinc	17.8		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	78	UT	ug/kg
High Molecular Weight PAH	26	UT	ug/kg
Low Molecular Weight PAH	147	JT	ug/kg
PCB Aroclors	1400	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	57	T	ug/kg
4,4'-DDE	96	JT	ug/kg
4,4'-DDT	31	T	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	184	JT	ug/kg
Dibenzofuran	36	UT	ug/kg
4-Methylphenol	26	UT	ug/kg

Largescale Sucker - Whole Body 08R010 LWG0108R010TSLSWBC00 Number of Fish in Composite: 6			
Chemical Name	Result	Qualifier	Units
Arsenic	0.225	T	mg/kg
Cadmium	0.0325	JT	mg/kg
Copper	1.1	T	mg/kg
Lead	0.191	T	mg/kg
Mercury	0.052	T	mg/kg
Nickel	0.565	T	mg/kg
Zinc	19.7	T	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	3000	JT	ug/kg
High Molecular Weight PAH	30	UT	ug/kg
Low Molecular Weight PAH	30	UT	ug/kg
PCB Aroclors	320	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	150	T	ug/kg
4,4'-DDE	185	T	ug/kg
4,4'-DDT	245	T	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	580	T	ug/kg
Dibenzofuran	30	UT	ug/kg
4-Methylphenol	30	UT	ug/kg

Largescale Sucker - Whole Body 09R006 LWG0109R006TSLSWBC00 Number of Fish in Composite: 6			
Chemical Name	Result	Qualifier	Units
Arsenic	0.18		mg/kg
Cadmium	0.015	J	mg/kg
Copper	0.841		mg/kg
Lead	0.125		mg/kg
Mercury	0.079		mg/kg
Nickel	0.81		mg/kg
Zinc	17.1		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	800	T	ug/kg
High Molecular Weight PAH	26	UT	ug/kg
Low Molecular Weight PAH	26	UT	ug/kg
PCB Aroclors	730	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	27.5	JT	ug/kg
4,4'-DDE	115	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	143	JT	ug/kg
Dibenzofuran	26	UT	ug/kg
4-Methylphenol	26	UT	ug/kg



Fish Collection Abbreviations

Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG LOWER WILLAMETTE GROUP

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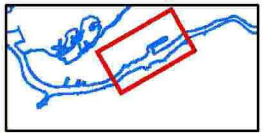

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Round 1 Sampling Locations and Results: ???

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps Tissue.mxd)
09/16/2004

ERA Fish Zone

03R014
04R023
05R006
06R024
07R009
08R010
08R032
09R006

River Mile
Navigation Channel
NearShoreZone
Docks & Structures
River Edge
Select Upland Properties

Private Outfalls
City of Portland Outfall
Abandoned City of Portland Outfalls

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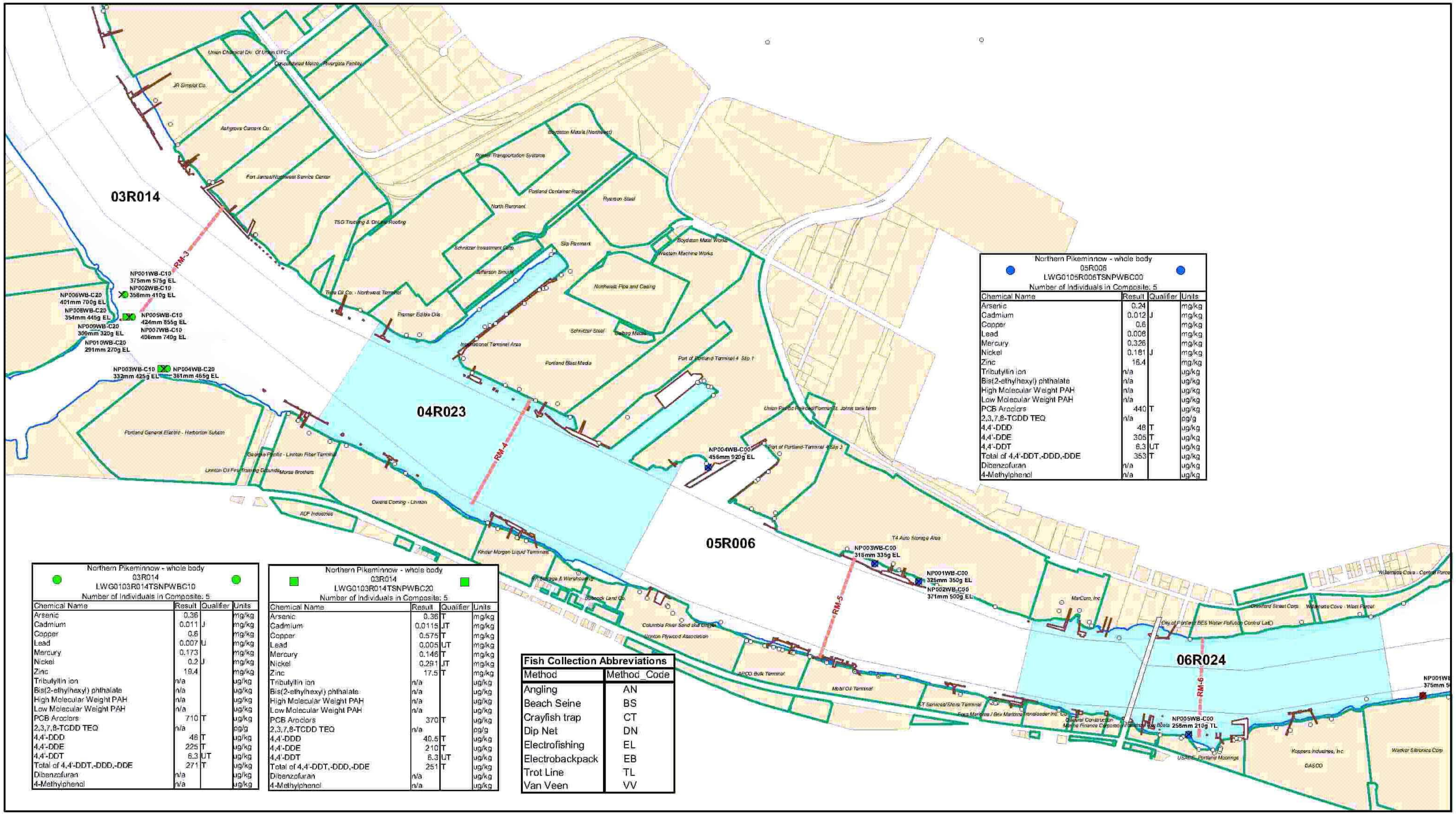
Figure 4-25b
Portland Harbor RI/FS
Round 1 Data Report
Largescale Sucker
Results

ANC03510
BZTO104(e)003510



Northern Pikeminnow - whole body 05R006 LWG0105R006TSNPWBC00 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.24		mg/kg
Cadmium	0.012	J	mg/kg
Copper	0.6		mg/kg
Lead	0.008		mg/kg
Mercury	0.326		mg/kg
Nickel	0.181	J	mg/kg
Zinc	16.4		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	440	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	48	T	ug/kg
4,4'-DDE	305	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	353	T	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Northern Pikeminnow - whole body 03R014 LWG0103R014TSNPWBC10 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.36		mg/kg
Cadmium	0.011	J	mg/kg
Copper	0.6		mg/kg
Lead	0.007	U	mg/kg
Mercury	0.173		mg/kg
Nickel	0.2	J	mg/kg
Zinc	19.4		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	710	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	46	T	ug/kg
4,4'-DDE	225	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	271	T	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Northern Pikeminnow - whole body 03R014 LWG0103R014TSNPWBC20 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.36	T	mg/kg
Cadmium	0.0115	JT	mg/kg
Copper	0.575	T	mg/kg
Lead	0.005	UT	mg/kg
Mercury	0.146	T	mg/kg
Nickel	0.291	JT	mg/kg
Zinc	17.5	T	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	370	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	40.5	T	ug/kg
4,4'-DDE	210	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	251	T	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Fish Collection Abbreviations	
Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
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Docks & In-water Structures: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
Round 1 Sampling Locations and Results: ???

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps Tissue.mxd)
09/16/2004

ERA Fish Zone

03R014
04R023
05R006
06R024
07R009
08R010
08R032
09R006

Docks & Structures
River Edge
Select Upland Properties
Navigation Channel
River Mile

City of Portland Outfall
Private Outfalls
Abandoned City of Portland Outfalls

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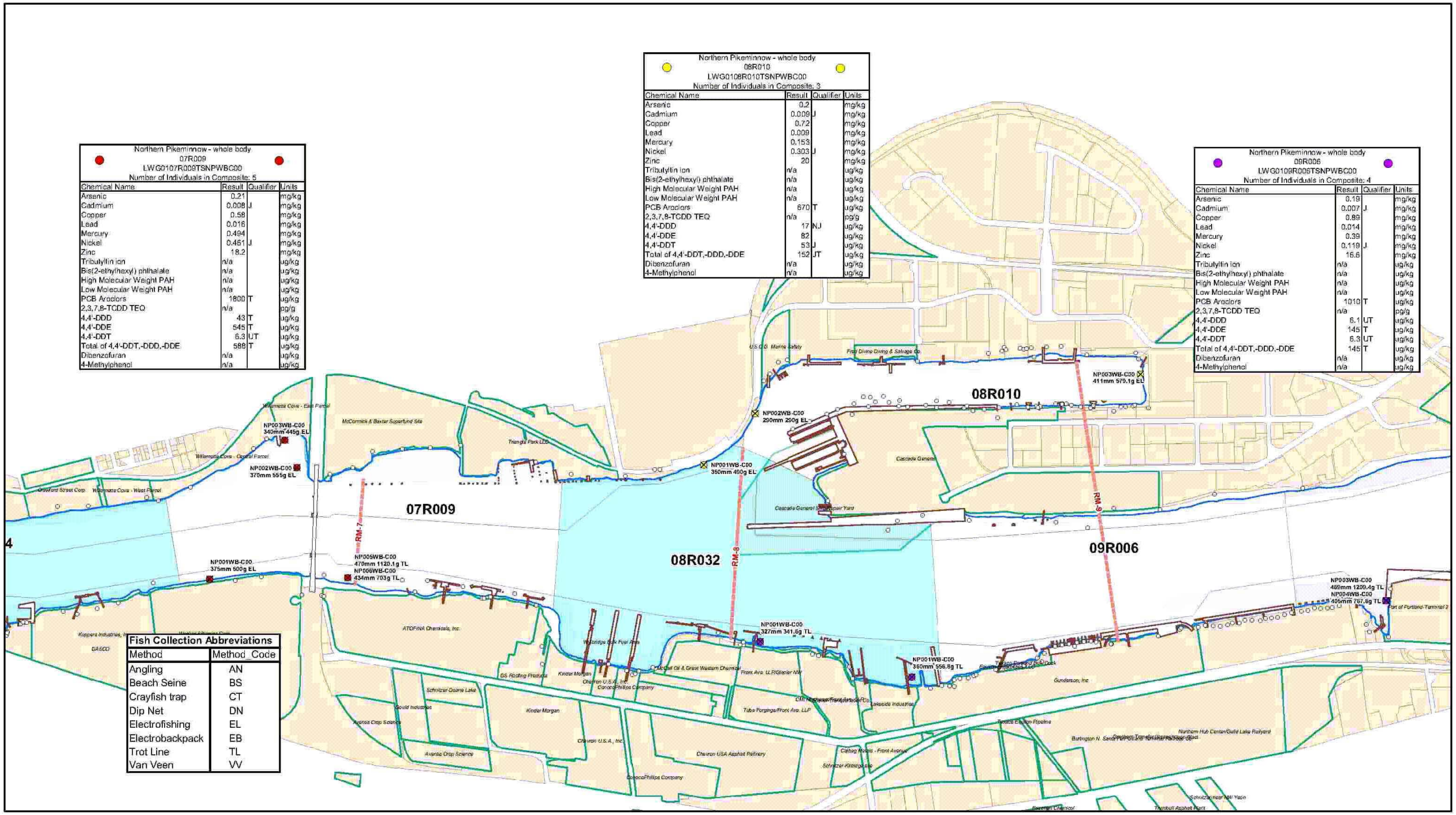
Figure 4-26a
Portland Harbor RI/FS
Round 1 Report
Northern Pikeminnow
Results

BZTO104(e)003511
ANC03511



Northern Pikeminnow - whole body 07R009 LWG0107R009TSNPWBC00 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.21		mg/kg
Cadmium	0.008	J	mg/kg
Copper	0.58		mg/kg
Lead	0.016		mg/kg
Mercury	0.494		mg/kg
Nickel	0.461	J	mg/kg
Zinc	18.2		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	1800	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	43	T	ug/kg
4,4'-DDE	545	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	588	T	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

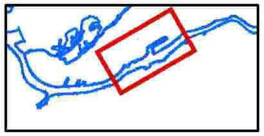
Northern Pikeminnow - whole body 08R010 LWG0108R010TSNPWBC00 Number of Individuals in Composite: 3			
Chemical Name	Result	Qualifier	Units
Arsenic	0.2		mg/kg
Cadmium	0.009	J	mg/kg
Copper	0.72		mg/kg
Lead	0.009		mg/kg
Mercury	0.153		mg/kg
Nickel	0.303	J	mg/kg
Zinc	20		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	670	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	17	NJ	ug/kg
4,4'-DDE	82		ug/kg
4,4'-DDT	53	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	152	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Northern Pikeminnow - whole body 09R006 LWG0109R006TSNPWBC00 Number of Individuals in Composite: 4			
Chemical Name	Result	Qualifier	Units
Arsenic	0.19		mg/kg
Cadmium	0.007	J	mg/kg
Copper	0.89		mg/kg
Lead	0.014		mg/kg
Mercury	0.39		mg/kg
Nickel	0.119	J	mg/kg
Zinc	16.6		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	1010	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	6.1	UT	ug/kg
4,4'-DDE	145	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	145	T	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Fish Collection Abbreviations	
Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG Lower Willamette Group

integral consulting inc.



FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS .
Channel & River miles: Developed from US Army Corps of Engineers information.
Bathymetric Information: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. (DEA) Dec, 2001/Jan, 2002 and July/Sept 2002.
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Round 1 Sampling Locations and Results: ???

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps Tissue.mxd)
09/16/2004

ERA Fish Zone

03R014
04R023
05R006
06R024
07R009
08R010
08R032
09R006

Docks & Structures
River Edge
Navigation Channel
River Mile
Select Upland Properties

City of Portland Outfall
Private Outfalls
Abandoned City of Portland Outfalls

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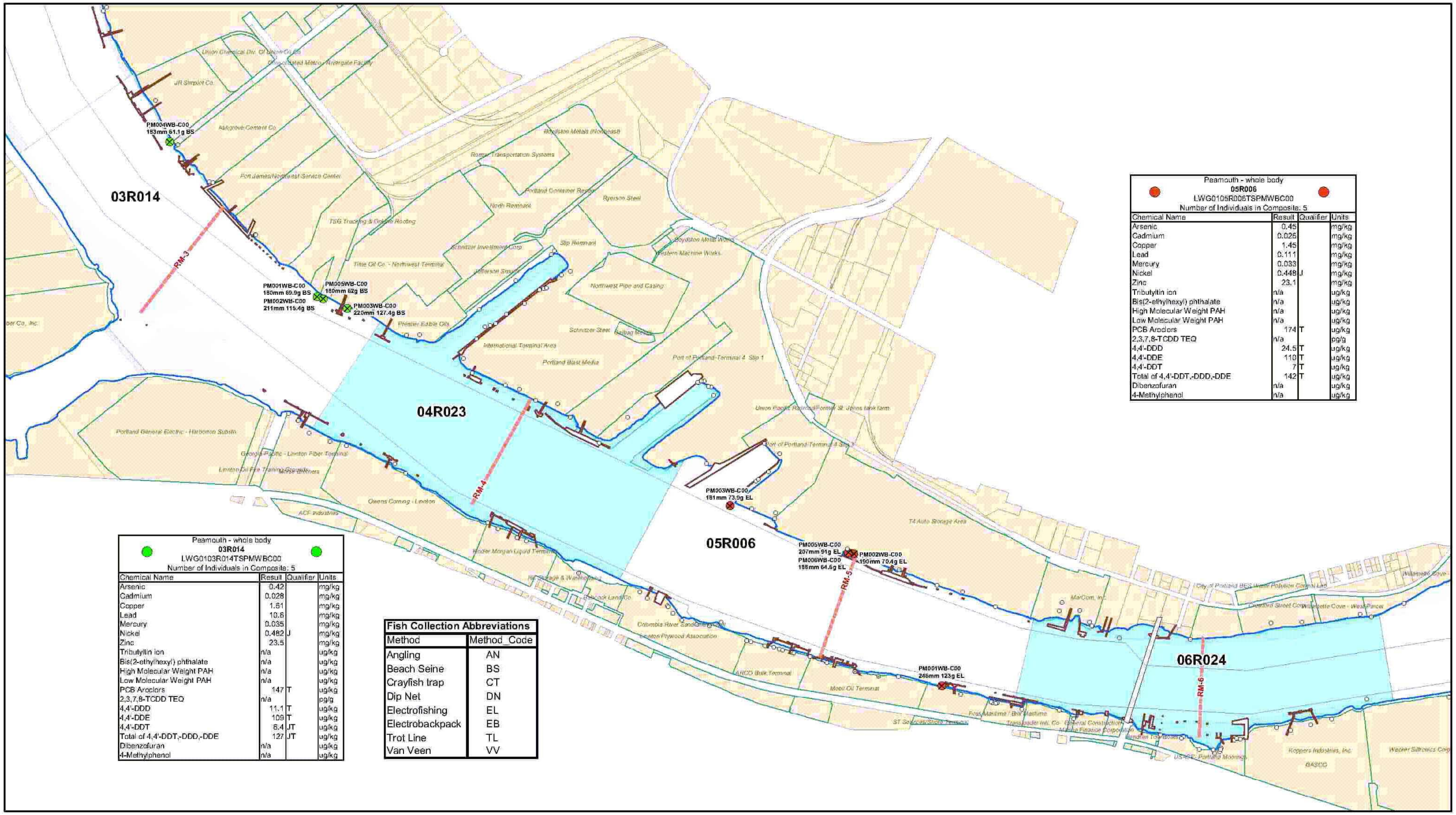
Figure 4-26b
Portland Harbor RI/FS
Round 1 Report
Northern Pikeminnow
Results

BZTO104(e)003512
ANC03512



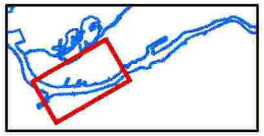
Peamouth - whole body 05R006 LWG0105R006TSPMWBC00 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.45		mg/kg
Cadmium	0.026		mg/kg
Copper	1.45		mg/kg
Lead	0.111		mg/kg
Mercury	0.033		mg/kg
Nickel	0.448	J	mg/kg
Zinc	23.1		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	174	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	24.5	T	ug/kg
4,4'-DDE	110	T	ug/kg
4,4'-DDT	7	T	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	142	T	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Peamouth - whole body 03R014 LWG0103R014TSPMWBC00 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.42		mg/kg
Cadmium	0.028		mg/kg
Copper	1.61		mg/kg
Lead	10.6		mg/kg
Mercury	0.035		mg/kg
Nickel	0.482	J	mg/kg
Zinc	23.5		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	147	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	11.1	T	ug/kg
4,4'-DDE	109	T	ug/kg
4,4'-DDT	6.4	JT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	127	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Fish Collection Abbreviations	
Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG LOWER WILLAMETTE GROUP

integral consulting inc.



FEATURE SOURCES:
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Docks & In-water Structures: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps TissuePM.mxd)
Plot Date: 09/16/2004

× Actual Peamouth Collection Location

ERA Fish Zone
- 03R014
- 04R023
- 05R006
- 06R024
- 07R009
- 08R010
- 08R032
- 09R006

- Docks & Structures
- River Edge
- Select Upland Properties
- Private Outfalls
- City of Portland Outfall
- Abandoned City of Portland Outfalls

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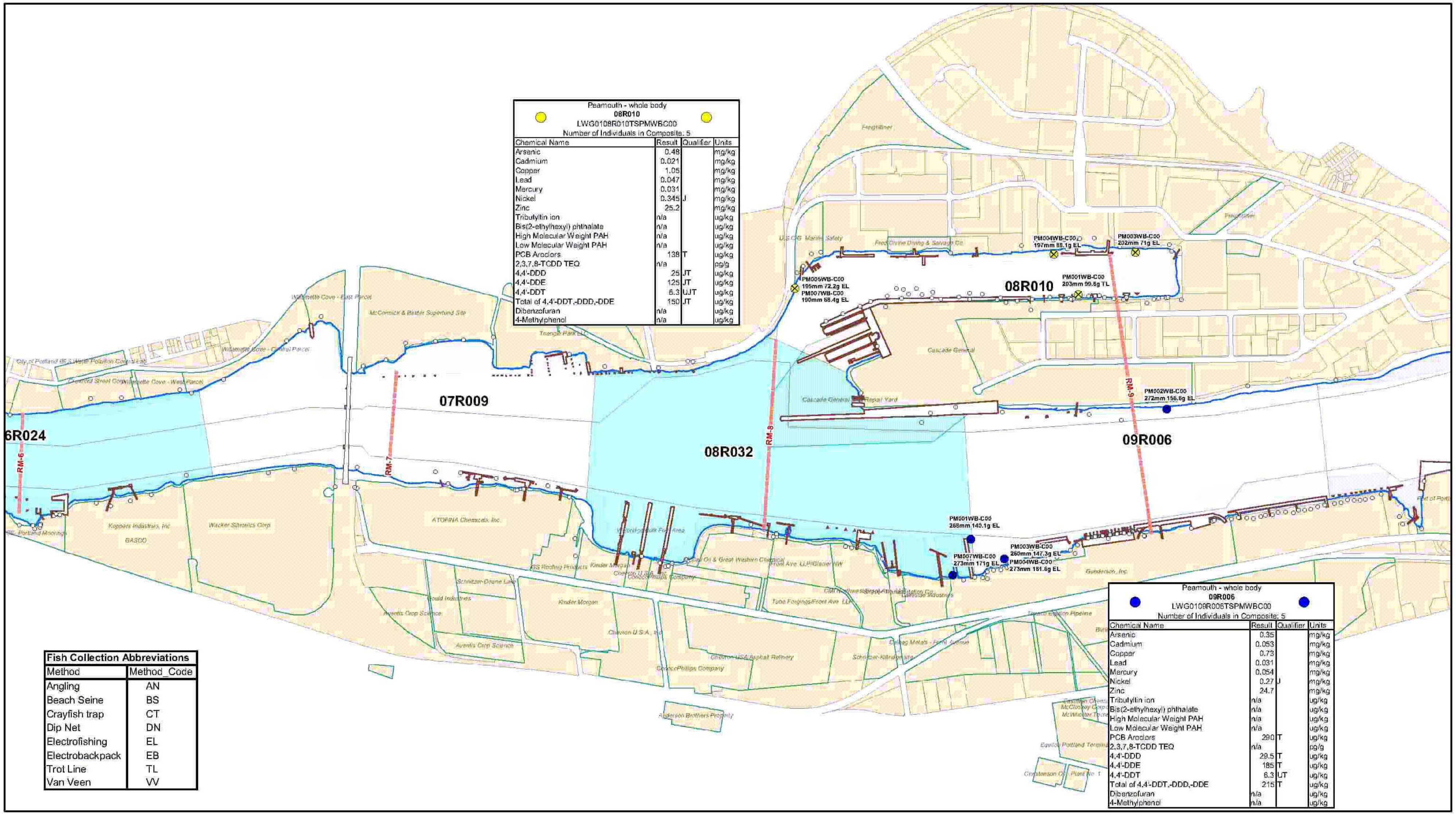
Figure 4-27a
Portland Harbor RI/FS
Round 1 Report
Peamouth
Results

BZTO104(e)003513
ANC03513



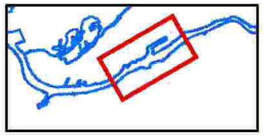
Peamouth - whole body 08R010 LWG0108R010TSPMWBC00 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.48		mg/kg
Cadmium	0.021		mg/kg
Copper	1.05		mg/kg
Lead	0.047		mg/kg
Mercury	0.031		mg/kg
Nickel	0.345	J	mg/kg
Zinc	25.2		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	138	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	25	JT	ug/kg
4,4'-DDE	125	JT	ug/kg
4,4'-DDT	6.3	UJT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	150	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Peamouth - whole body 09R006 LWG0109R006TSPMWBC00 Number of Individuals in Composite: 5			
Chemical Name	Result	Qualifier	Units
Arsenic	0.35		mg/kg
Cadmium	0.053		mg/kg
Copper	0.73		mg/kg
Lead	0.031		mg/kg
Mercury	0.054		mg/kg
Nickel	0.27	J	mg/kg
Zinc	24.7		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	290	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	29.5	T	ug/kg
4,4'-DDE	185	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	215	T	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Fish Collection Abbreviations	
Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG LOWER WILLAMETTE GROUP

integral consulting inc.



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Plot Date: 09/16/2004

× Actual Peamouth Collection Location

ERA Fish Zone

- 03R014
- 04R023
- 05R006
- 06R024
- 07R009
- 08R010
- 08R032
- 09R006

- Docks & Structures
- River Edge
- Select Upland Properties
- Private Outfalls
- City of Portland Outfall
- Abandoned City of Portland Outfalls

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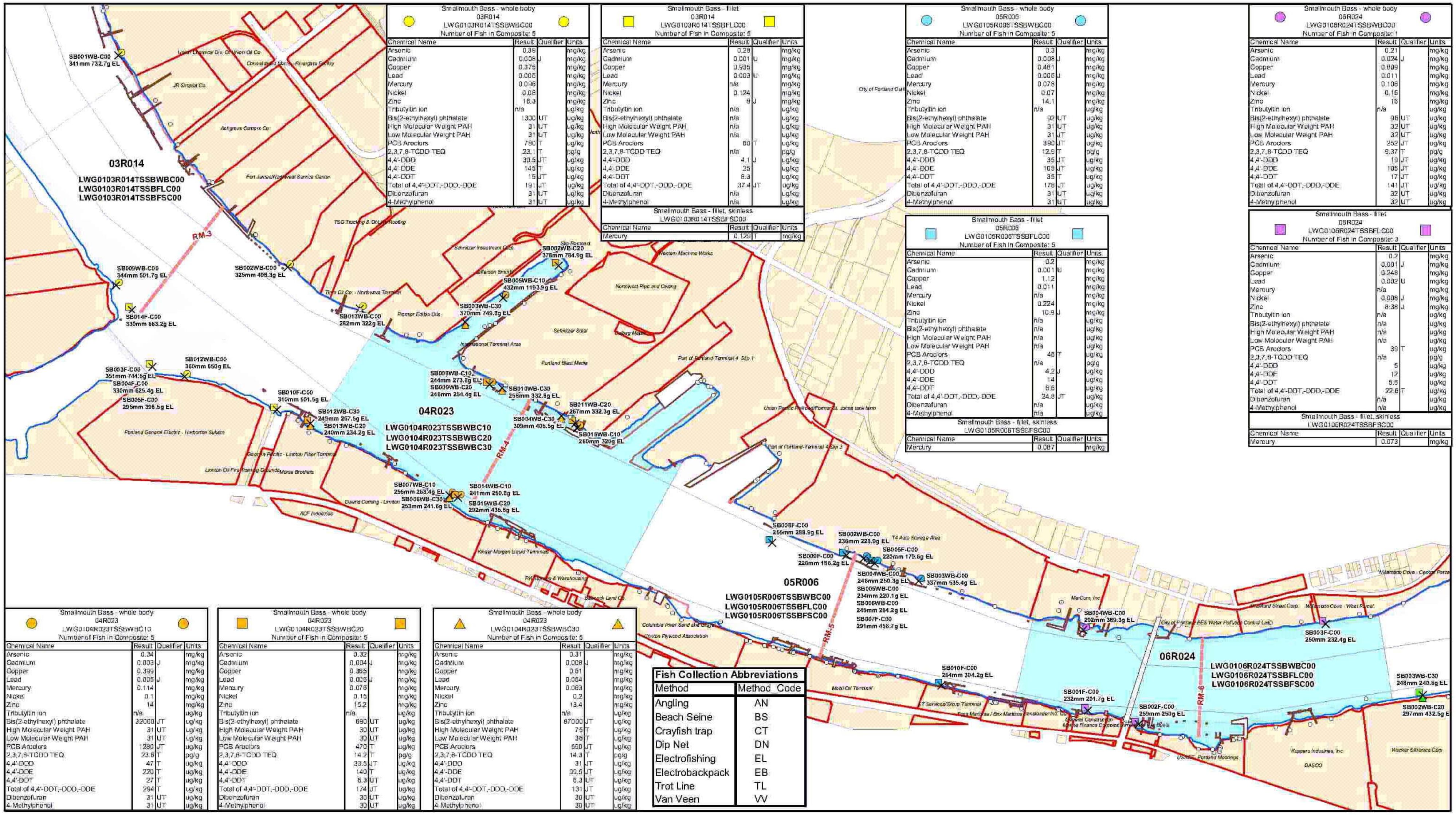
Figure 4-27b
Portland Harbor RI/FS
Round 1 Report
Peamouth
Results

BZTO104(e)003514

ANC03514



Smallmouth Bass - whole boby
03R014
LWG0103R014TSSBWBC00
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.39		mg/kg
Cadmium	0.008	J	mg/kg
Copper	0.375		mg/kg
Lead	0.005		mg/kg
Mercury	0.096		mg/kg
Nickel	0.08		mg/kg
Zinc	16.3		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	1300	UT	ug/kg
High Molecular Weight PAH	31	UT	ug/kg
Low Molecular Weight PAH	31	UT	ug/kg
PCB Aroclors	780	T	ug/kg
2,3,7,8-TCDD TEQ	23.1	T	pg/g
4,4'-DDD	30.5	JT	ug/kg
4,4'-DDE	145	T	ug/kg
4,4'-DDT	15	JT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	191	JT	ug/kg
Dibenzofuran	31	UT	ug/kg
4-Methylphenol	31	UT	ug/kg

Smallmouth Bass - fillet
03R014
LWG0103R014TSSBFLC00
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.28		mg/kg
Cadmium	0.001	U	mg/kg
Copper	0.935		mg/kg
Lead	0.003	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.124		mg/kg
Zinc	9	J	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	60	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	4.1	J	ug/kg
4,4'-DDE	25		ug/kg
4,4'-DDT	8.3		ug/kg
Total of 4,4'-DDT,-DDD,-DDE	37.4	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Smallmouth Bass - fillet, skinless
LWG0103R014TSSBFSC00

Chemical Name	Result	Qualifier	Units
Mercury	0.129	T	mg/kg

Smallmouth Bass - whole body
05R006
LWG0105R006TSSBWBC00
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.3		mg/kg
Cadmium	0.008	J	mg/kg
Copper	0.481		mg/kg
Lead	0.006	J	mg/kg
Mercury	0.078		mg/kg
Nickel	0.07		mg/kg
Zinc	14.1		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	92	UT	ug/kg
High Molecular Weight PAH	31	UT	ug/kg
Low Molecular Weight PAH	31	JT	ug/kg
PCB Aroclors	390	JT	ug/kg
2,3,7,8-TCDD TEQ	12.9	T	pg/g
4,4'-DDD	35	JT	ug/kg
4,4'-DDE	109	JT	ug/kg
4,4'-DDT	35	T	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	178	JT	ug/kg
Dibenzofuran	31	UT	ug/kg
4-Methylphenol	31	UT	ug/kg

Smallmouth Bass - fillet
05R006
LWG0105R006TSSBFLC00
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.2		mg/kg
Cadmium	0.001	U	mg/kg
Copper	1.12		mg/kg
Lead	0.011		mg/kg
Mercury	n/a		mg/kg
Nickel	0.224		mg/kg
Zinc	10.9	J	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	46	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	4.2	J	ug/kg
4,4'-DDE	14		ug/kg
4,4'-DDT	6.6		ug/kg
Total of 4,4'-DDT,-DDD,-DDE	24.8	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Smallmouth Bass - fillet, skinless
LWG0105R006TSSBFSC00

Chemical Name	Result	Qualifier	Units
Mercury	0.087		mg/kg

Smallmouth Bass - whole body
06R024
LWG0106R024TSSBWBC00
Number of Fish in Composite: 1

Chemical Name	Result	Qualifier	Units
Arsenic	0.21		mg/kg
Cadmium	0.024	J	mg/kg
Copper	0.809		mg/kg
Lead	0.011		mg/kg
Mercury	0.106		mg/kg
Nickel	0.16		mg/kg
Zinc	16		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	96	UT	ug/kg
High Molecular Weight PAH	32	UT	ug/kg
Low Molecular Weight PAH	32	UT	ug/kg
PCB Aroclors	252	JT	ug/kg
2,3,7,8-TCDD TEQ	9.37	T	pg/g
4,4'-DDD	19	JT	ug/kg
4,4'-DDE	105	JT	ug/kg
4,4'-DDT	17	JT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	141	JT	ug/kg
Dibenzofuran	32	UT	ug/kg
4-Methylphenol	32	UT	ug/kg

Smallmouth Bass - fillet
06R024
LWG0106R024TSSBFLC00
Number of Fish in Composite: 3

Chemical Name	Result	Qualifier	Units
Arsenic	0.2		mg/kg
Cadmium	0.001	J	mg/kg
Copper	0.249		mg/kg
Lead	0.002	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.008	J	mg/kg
Zinc	8.38	J	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	39	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	5		ug/kg
4,4'-DDE	12		ug/kg
4,4'-DDT	5.6		ug/kg
Total of 4,4'-DDT,-DDD,-DDE	22.6	T	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Smallmouth Bass - fillet, skinless
LWG0106R024TSSBFSC00

Chemical Name	Result	Qualifier	Units
Mercury	0.073		mg/kg

Smallmouth Bass - whole body
04R023
LWG0104R023TSSBWBC10
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.34		mg/kg
Cadmium	0.003	J	mg/kg
Copper	0.399		mg/kg
Lead	0.005	J	mg/kg
Mercury	0.114		mg/kg
Nickel	0.1		mg/kg
Zinc	14		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	32000	JT	ug/kg
High Molecular Weight PAH	31	UT	ug/kg
Low Molecular Weight PAH	31	UT	ug/kg
PCB Aroclors	1280	JT	ug/kg
2,3,7,8-TCDD TEQ	23.6	T	pg/g
4,4'-DDD	47	T	ug/kg
4,4'-DDE	220	T	ug/kg
4,4'-DDT	27	T	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	294	T	ug/kg
Dibenzofuran	31	UT	ug/kg
4-Methylphenol	31	UT	ug/kg

Smallmouth Bass - whole body
04R023
LWG0104R023TSSBWBC20
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.32		mg/kg
Cadmium	0.004	J	mg/kg
Copper	0.365		mg/kg
Lead	0.006	J	mg/kg
Mercury	0.076		mg/kg
Nickel	0.15		mg/kg
Zinc	15.2		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	690	UT	ug/kg
High Molecular Weight PAH	30	UT	ug/kg
Low Molecular Weight PAH	30	UT	ug/kg
PCB Aroclors	470	T	ug/kg
2,3,7,8-TCDD TEQ	14.2	T	pg/g
4,4'-DDD	33.5	JT	ug/kg
4,4'-DDE	140	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	174	JT	ug/kg
Dibenzofuran	30	UT	ug/kg
4-Methylphenol	30	UT	ug/kg

Smallmouth Bass - whole body
04R023
LWG0104R023TSSBWBC30
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.31		mg/kg
Cadmium	0.008	J	mg/kg
Copper	0.61		mg/kg
Lead	0.054		mg/kg
Mercury	0.063		mg/kg
Nickel	0.2		mg/kg
Zinc	13.4		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	87000	JT	ug/kg
High Molecular Weight PAH	75	T	ug/kg
Low Molecular Weight PAH	36	T	ug/kg
PCB Aroclors	590	JT	ug/kg
2,3,7,8-TCDD TEQ	14.3	T	pg/g
4,4'-DDD	31	JT	ug/kg
4,4'-DDE	99.5	JT	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	131	JT	ug/kg
Dibenzofuran	30	UT	ug/kg
4-Methylphenol	30	UT	ug/kg

Fish Collection Abbreviations

Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG
LOWER WILLAMETTE GROUP

integral
consulting inc.

FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS .
Channel & River miles: Developed from US Army Corps of Engineers information.
Bathymetric Information: Multibeam bathymetric surveys conducted by David Evans and Associates, Inc. (DEA) Dec, 2001/Jan, 2002 and July/Sept 2002.
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Docks & In-water Structures: created by heads-up digitizing from the October 2001 0.33 ft. resolution color orthophotos.
Round 1 Sampling Locations and Results: ???

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps Tissue SMB.mxd)
09/07/2004

ERA Fish Zone
03R014
04R023
05R006
06R024
07R009
08R010
08R032
09R006

River Mile
Navigation Channel
NearShoreZone
Docks & Structures
River Edge
Select Upland Properties
Private Outfalls
City of Portland Outfall
Abandoned City of Portland Outfalls

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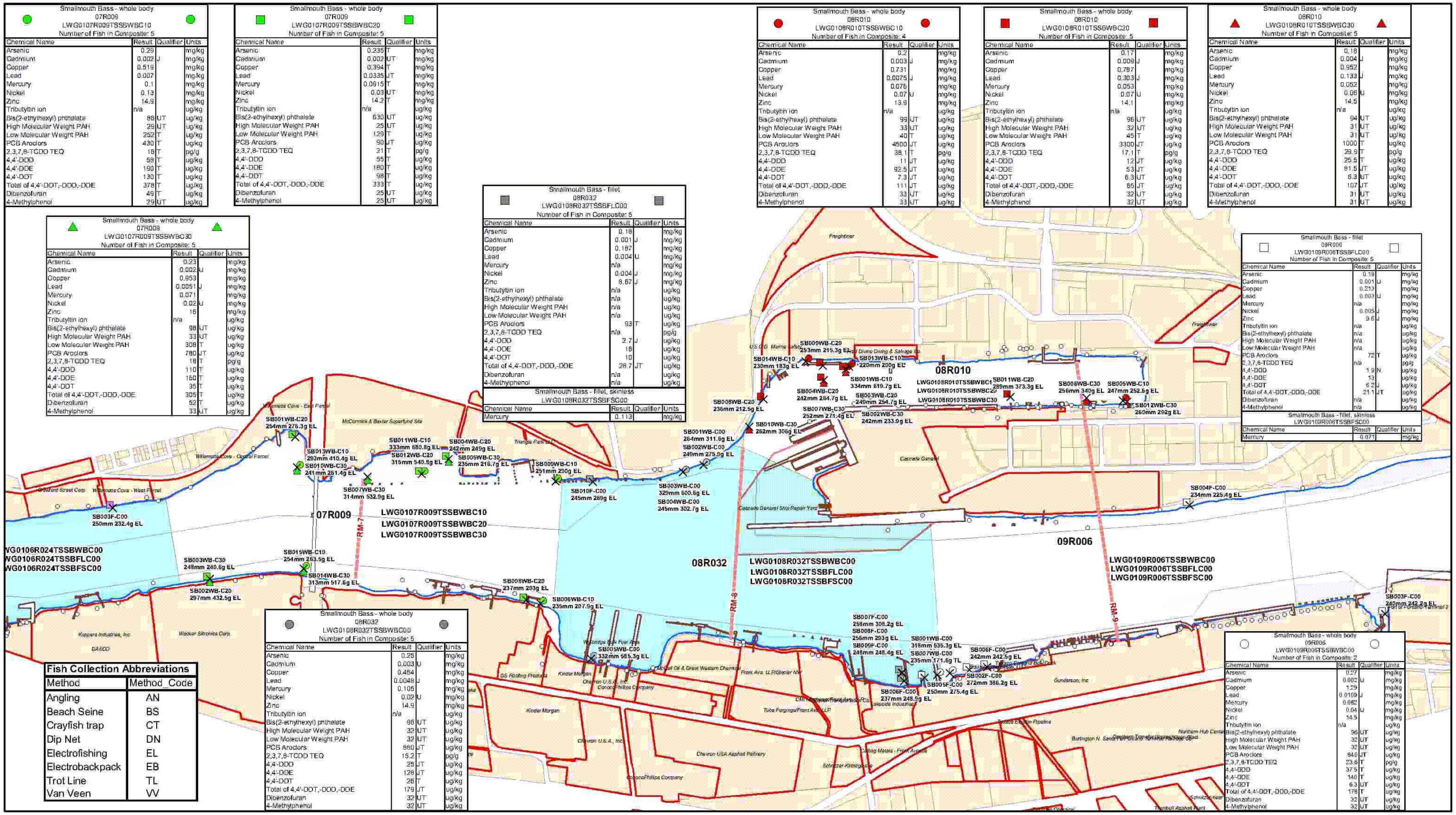
Figure 4-28a
Portland Harbor RI/FS
Round 1 Report
Smallmouth Bass
Results

BZTO104(e)003515
ANC03515



Smallmouth Bass - whole body
07R009
LWG0107R009TSSBWBC10
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.29		mg/kg
Cadmium	0.002	J	mg/kg
Copper	0.519		mg/kg
Lead	0.007		mg/kg
Mercury	0.1		mg/kg
Nickel	0.13		mg/kg
Zinc	14.9		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	86	UT	ug/kg
High Molecular Weight PAH	29	UT	ug/kg
Low Molecular Weight PAH	252	T	ug/kg
PCB Aroclors	430	T	ug/kg
2,3,7,8-TCDD TEQ	16	T	pg/g
4,4'-DDD	58	T	ug/kg
4,4'-DDE	190	T	ug/kg
4,4'-DDT	130	T	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	378	T	ug/kg
Dibenzofuran	49	T	ug/kg
4-Methylphenol	29	UT	ug/kg

Smallmouth Bass - whole body
07R009
LWG0107R009TSSBWBC20
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.235	T	mg/kg
Cadmium	0.002	UT	mg/kg
Copper	0.394	T	mg/kg
Lead	0.0335	JT	mg/kg
Mercury	0.0915	T	mg/kg
Nickel	0.03	UT	mg/kg
Zinc	14.2	T	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	630	UT	ug/kg
High Molecular Weight PAH	25	UT	ug/kg
Low Molecular Weight PAH	129	T	ug/kg
PCB Aroclors	90	JT	ug/kg
2,3,7,8-TCDD TEQ	21	T	pg/g
4,4'-DDD	55	T	ug/kg
4,4'-DDE	180	T	ug/kg
4,4'-DDT	98	T	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	333	T	ug/kg
Dibenzofuran	25	UT	ug/kg
4-Methylphenol	25	UT	ug/kg

Smallmouth Bass - whole body
07R009
LWG0107R009TSSBWBC30
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.23		mg/kg
Cadmium	0.002	U	mg/kg
Copper	0.953		mg/kg
Lead	0.0051	J	mg/kg
Mercury	0.071		mg/kg
Nickel	0.02	U	mg/kg
Zinc	16		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	98	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	308	T	ug/kg
PCB Aroclors	780	JT	ug/kg
2,3,7,8-TCDD TEQ	18	T	pg/g
4,4'-DDD	110	T	ug/kg
4,4'-DDE	160	T	ug/kg
4,4'-DDT	35	T	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	305	T	ug/kg
Dibenzofuran	52	T	ug/kg
4-Methylphenol	33	UT	ug/kg

Smallmouth Bass - fillet
08R032
LWG0108R032TSSBFLC00
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.18		mg/kg
Cadmium	0.001	J	mg/kg
Copper	0.187		mg/kg
Lead	0.004	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.004	J	mg/kg
Zinc	8.67	J	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	93	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	2.7	J	ug/kg
4,4'-DDE	16		ug/kg
4,4'-DDT	10		ug/kg
Total of 4,4'-DDT,-DDD,-DDE	28.7	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Smallmouth Bass - fillet, skinless
LWG0108R032TSSBFSC00

Chemical Name	Result	Qualifier	Units
Mercury	0.113		mg/kg

Smallmouth Bass - whole body
08R010
LWG0108R010TSSBWBC10
Number of Fish in Composite: 4

Chemical Name	Result	Qualifier	Units
Arsenic	0.2		mg/kg
Cadmium	0.003	J	mg/kg
Copper	0.731		mg/kg
Lead	0.0075	J	mg/kg
Mercury	0.076		mg/kg
Nickel	0.07	U	mg/kg
Zinc	13.9		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	99	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	40	T	ug/kg
PCB Aroclors	4500	JT	ug/kg
2,3,7,8-TCDD TEQ	38.1	T	pg/g
4,4'-DDD	11	JT	ug/kg
4,4'-DDE	92.5	JT	ug/kg
4,4'-DDT	7.3	JT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	111	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Smallmouth Bass - whole body
08R010
LWG0108R010TSSBWBC20
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.17		mg/kg
Cadmium	0.009	J	mg/kg
Copper	0.787		mg/kg
Lead	0.303	J	mg/kg
Mercury	0.053		mg/kg
Nickel	0.07	U	mg/kg
Zinc	14.1		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	96	UT	ug/kg
High Molecular Weight PAH	32	UT	ug/kg
Low Molecular Weight PAH	45	T	ug/kg
PCB Aroclors	3300	JT	ug/kg
2,3,7,8-TCDD TEQ	17.1	T	pg/g
4,4'-DDD	12	JT	ug/kg
4,4'-DDE	53	JT	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	65	JT	ug/kg
Dibenzofuran	32	UT	ug/kg
4-Methylphenol	32	UT	ug/kg

Smallmouth Bass - whole body
08R010
LWG0108R010TSSBWBC30
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.18		mg/kg
Cadmium	0.004	J	mg/kg
Copper	0.952		mg/kg
Lead	0.133	J	mg/kg
Mercury	0.052		mg/kg
Nickel	0.06	U	mg/kg
Zinc	14.5		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	94	UT	ug/kg
High Molecular Weight PAH	31	UT	ug/kg
Low Molecular Weight PAH	31	UT	ug/kg
PCB Aroclors	1000	T	ug/kg
2,3,7,8-TCDD TEQ	29.9	T	pg/g
4,4'-DDD	25.5	T	ug/kg
4,4'-DDE	81.5	JT	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	107	JT	ug/kg
Dibenzofuran	31	UT	ug/kg
4-Methylphenol	31	UT	ug/kg

Smallmouth Bass - fillet
09R006
LWG0109R006TSSBFLC00
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.19		mg/kg
Cadmium	0.001	U	mg/kg
Copper	0.213		mg/kg
Lead	0.003	U	mg/kg
Mercury	n/a		mg/kg
Nickel	0.005	J	mg/kg
Zinc	9.6	J	mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	n/a		ug/kg
High Molecular Weight PAH	n/a		ug/kg
Low Molecular Weight PAH	n/a		ug/kg
PCB Aroclors	72	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	1.9	N	ug/kg
4,4'-DDE	13		ug/kg
4,4'-DDT	6.2	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	21.1	JT	ug/kg
Dibenzofuran	n/a		ug/kg
4-Methylphenol	n/a		ug/kg

Smallmouth Bass - fillet, skinless
LWG0109R006TSSBFSC00

Chemical Name	Result	Qualifier	Units
Mercury	0.071		mg/kg

Smallmouth Bass - whole body
08R032
LWG0108R032TSSBWBC00
Number of Fish in Composite: 5

Chemical Name	Result	Qualifier	Units
Arsenic	0.25		mg/kg
Cadmium	0.003	U	mg/kg
Copper	0.454		mg/kg
Lead	0.0048	J	mg/kg
Mercury	0.105		mg/kg
Nickel	0.02	U	mg/kg
Zinc	14.9		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	96	UT	ug/kg
High Molecular Weight PAH	32	UT	ug/kg
Low Molecular Weight PAH	32	UT	ug/kg
PCB Aroclors	880	JT	ug/kg
2,3,7,8-TCDD TEQ	15.2	T	pg/g
4,4'-DDD	25	JT	ug/kg
4,4'-DDE	128	JT	ug/kg
4,4'-DDT	26	T	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	179	JT	ug/kg
Dibenzofuran	32	UT	ug/kg
4-Methylphenol	32	UT	ug/kg

Smallmouth Bass - whole body
09R006
LWG0109R006TSSBWBC00
Number of Fish in Composite: 2

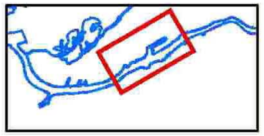
Chemical Name	Result	Qualifier	Units
Arsenic	0.27		mg/kg
Cadmium	0.002	U	mg/kg
Copper	1.29		mg/kg
Lead	0.0109	J	mg/kg
Mercury	0.082		mg/kg
Nickel	0.04	U	mg/kg
Zinc	14.5		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	96	UT	ug/kg
High Molecular Weight PAH	32	UT	ug/kg
Low Molecular Weight PAH	32	UT	ug/kg
PCB Aroclors	840	JT	ug/kg
2,3,7,8-TCDD TEQ	23.6	T	pg/g
4,4'-DDD	37.5	T	ug/kg
4,4'-DDE	140	T	ug/kg
4,4'-DDT	6.3	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	178	T	ug/kg
Dibenzofuran	32	UT	ug/kg
4-Methylphenol	32	UT	ug/kg

Fish Collection Abbreviations

Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG Lower Willamette Group

integral consulting inc.



FEATURE SOURCES:
Transportation, Water, Property, Zoning or Boundaries: Metro RLIS .
Channel & River miles: Developed from US Army Corps of Engineers information.
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Round 1 Sampling Locations and Results: ???

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps Tissue SMB.mxd)
09/07/2004

ERA Fish Zone
03R014
04R023
05R006
06R024
07R009
08R010
08R032
09R006

River Mile
Navigation Channel
NearShoreZone
Docks & Structures
River Edge
Select Upland Properties
Private Outfalls
City of Portland Outfall
Abandoned City of Portland Outfalls

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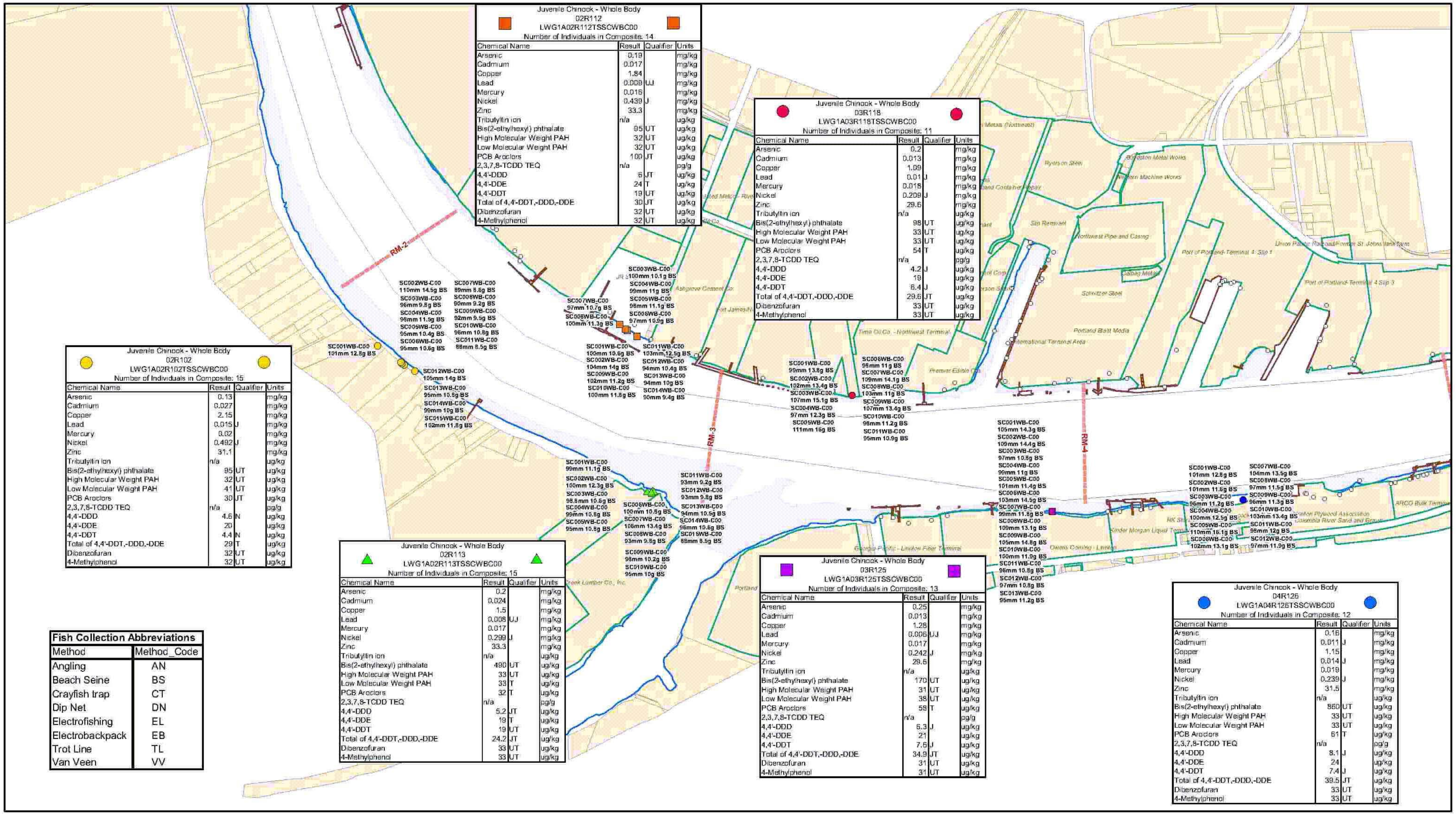
Figure 4-28b
Portland Harbor RI/FS
Round 1 Report
Smallmouth Bass
Results

BZT0104(e)003516
ANC03516



Juvenile Chinook - Whole Body
02R112
LWG1A02R112TSSCWBC00
Number of Individuals in Composite: 14

Chemical Name	Result	Qualifier	Units
Arsenic	0.19		mg/kg
Cadmium	0.017		mg/kg
Copper	1.84		mg/kg
Lead	0.009	UJ	mg/kg
Mercury	0.016		mg/kg
Nickel	0.439	J	mg/kg
Zinc	33.3		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	95	UT	ug/kg
High Molecular Weight PAH	32	UT	ug/kg
Low Molecular Weight PAH	32	UT	ug/kg
PCB Aroclors	100	JT	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	6	JT	ug/kg
4,4'-DDE	24	T	ug/kg
4,4'-DDT	19	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	30	JT	ug/kg
Dibenzofuran	32	UT	ug/kg
4-Methylphenol	32	UT	ug/kg

Juvenile Chinook - Whole Body
03R118
LWG1A03R118TSSCWBC00
Number of Individuals in Composite: 11

Chemical Name	Result	Qualifier	Units
Arsenic	0.2		mg/kg
Cadmium	0.013		mg/kg
Copper	1.09		mg/kg
Lead	0.01	J	mg/kg
Mercury	0.018		mg/kg
Nickel	0.209	J	mg/kg
Zinc	29.6		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	98	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	33	UT	ug/kg
PCB Aroclors	54	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	4.2	J	ug/kg
4,4'-DDE	19		ug/kg
4,4'-DDT	6.4	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	29.6	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Juvenile Chinook - Whole Body
02R102
LWG1A02R102TSSCWBC00
Number of Individuals in Composite: 15

Chemical Name	Result	Qualifier	Units
Arsenic	0.13		mg/kg
Cadmium	0.027		mg/kg
Copper	2.15		mg/kg
Lead	0.015	J	mg/kg
Mercury	0.02		mg/kg
Nickel	0.492	J	mg/kg
Zinc	31.1		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	95	UT	ug/kg
High Molecular Weight PAH	32	UT	ug/kg
Low Molecular Weight PAH	41	UT	ug/kg
PCB Aroclors	30	JT	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	4.6	N	ug/kg
4,4'-DDE	20		ug/kg
4,4'-DDT	4.4	N	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	29	T	ug/kg
Dibenzofuran	32	UT	ug/kg
4-Methylphenol	32	UT	ug/kg

Juvenile Chinook - Whole Body
02R113
LWG1A02R113TSSCWBC00
Number of Individuals in Composite: 15

Chemical Name	Result	Qualifier	Units
Arsenic	0.2		mg/kg
Cadmium	0.024		mg/kg
Copper	1.5		mg/kg
Lead	0.008	UJ	mg/kg
Mercury	0.017		mg/kg
Nickel	0.299	J	mg/kg
Zinc	33.3		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	490	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	33	T	ug/kg
PCB Aroclors	32	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	5.2	JT	ug/kg
4,4'-DDE	19	T	ug/kg
4,4'-DDT	19	UT	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	24.2	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Juvenile Chinook - Whole Body
03R125
LWG1A03R125TSSCWBC00
Number of Individuals in Composite: 13

Chemical Name	Result	Qualifier	Units
Arsenic	0.25		mg/kg
Cadmium	0.013		mg/kg
Copper	1.28		mg/kg
Lead	0.006	UJ	mg/kg
Mercury	0.017		mg/kg
Nickel	0.242	J	mg/kg
Zinc	29.6		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	170	UT	ug/kg
High Molecular Weight PAH	31	UT	ug/kg
Low Molecular Weight PAH	38	UT	ug/kg
PCB Aroclors	58	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	6.3	J	ug/kg
4,4'-DDE	21		ug/kg
4,4'-DDT	7.6	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	34.9	JT	ug/kg
Dibenzofuran	31	UT	ug/kg
4-Methylphenol	31	UT	ug/kg

Juvenile Chinook - Whole Body
04R126
LWG1A04R126TSSCWBC00
Number of Individuals in Composite: 12

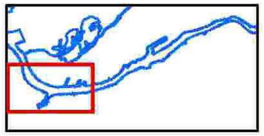
Chemical Name	Result	Qualifier	Units
Arsenic	0.16		mg/kg
Cadmium	0.011	J	mg/kg
Copper	1.15		mg/kg
Lead	0.014	J	mg/kg
Mercury	0.019		mg/kg
Nickel	0.239	J	mg/kg
Zinc	31.5		mg/kg
Tributyltin ion	n/a		ug/kg
Bis(2-ethylhexyl) phthalate	860	UT	ug/kg
High Molecular Weight PAH	33	UT	ug/kg
Low Molecular Weight PAH	33	UT	ug/kg
PCB Aroclors	61	T	ug/kg
2,3,7,8-TCDD TEQ	n/a		pg/g
4,4'-DDD	8.1	J	ug/kg
4,4'-DDE	24		ug/kg
4,4'-DDT	7.4	J	ug/kg
Total of 4,4'-DDT,-DDD,-DDE	39.5	JT	ug/kg
Dibenzofuran	33	UT	ug/kg
4-Methylphenol	33	UT	ug/kg

Fish Collection Abbreviations

Method	Method_Code
Angling	AN
Beach Seine	BS
Crayfish trap	CT
Dip Net	DN
Electrofishing	EL
Electrobackpack	EB
Trot Line	TL
Van Veen	VV

LWG Lower Willamette Group

integral consulting inc.



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Round 1 Sampling Locations and Results: Derived from the Site Characterization Risk Assessment Database (2004).

Map Document: (C:\GIS\Projects\Portland_Harbor\LWG-Map-Projects\Chemistry-Round_1\Round 1 Report Chem Maps TissueJC.mxd)
Plot Date: 09/16/2004

Docks & Structures
River Edge
Select Upland Properties
Navigation Channel
River Miles
Private Outfalls
City of Portland Outfall
Abandoned City of Portland Outfalls

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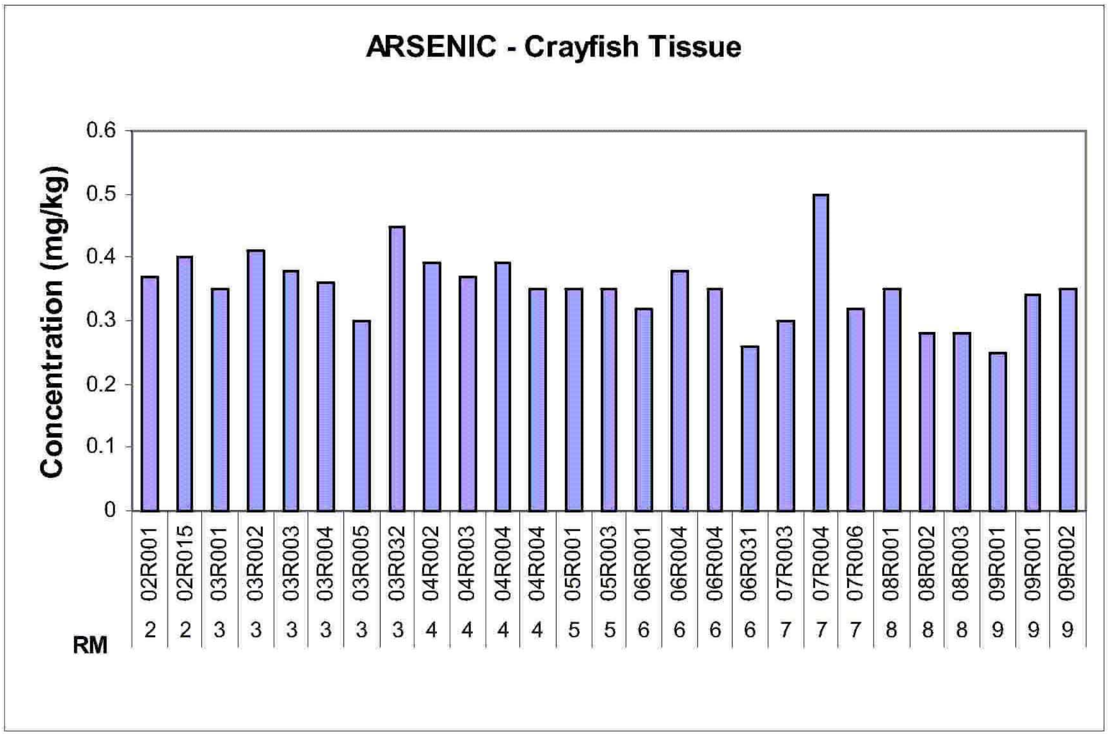
Figure 4-29
Portland Harbor RI/FS
Round 1 Report
Subyearling Chinook
Results

BZTO104(e)003517
ANC03517



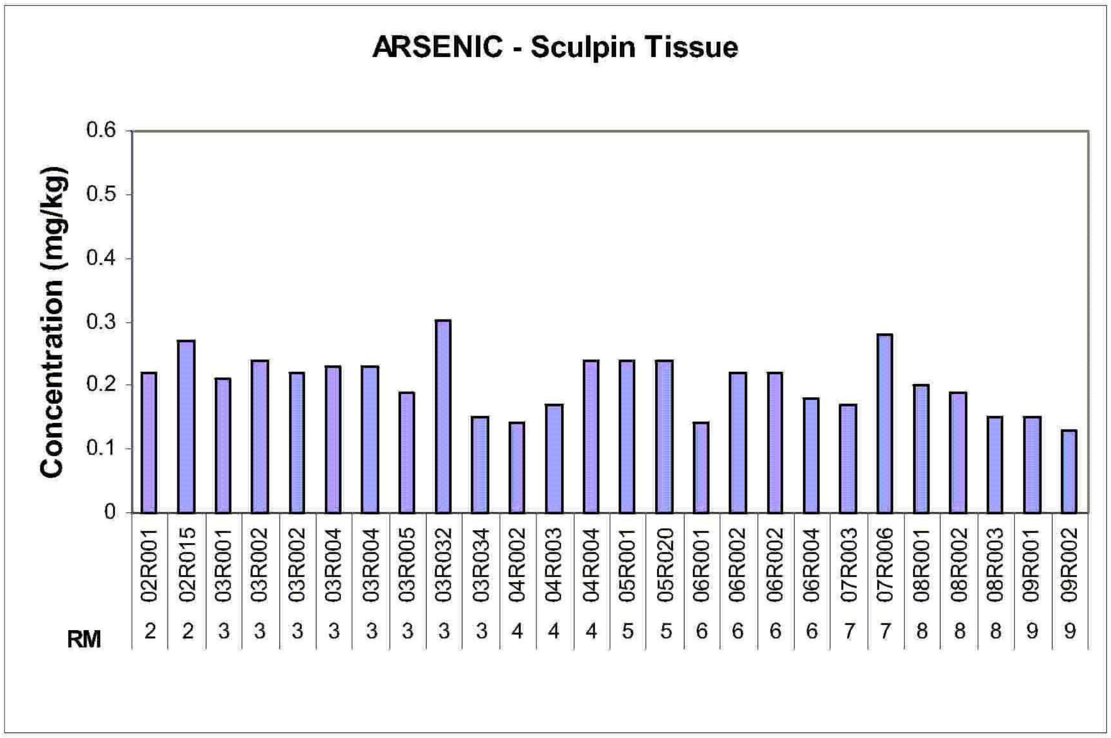
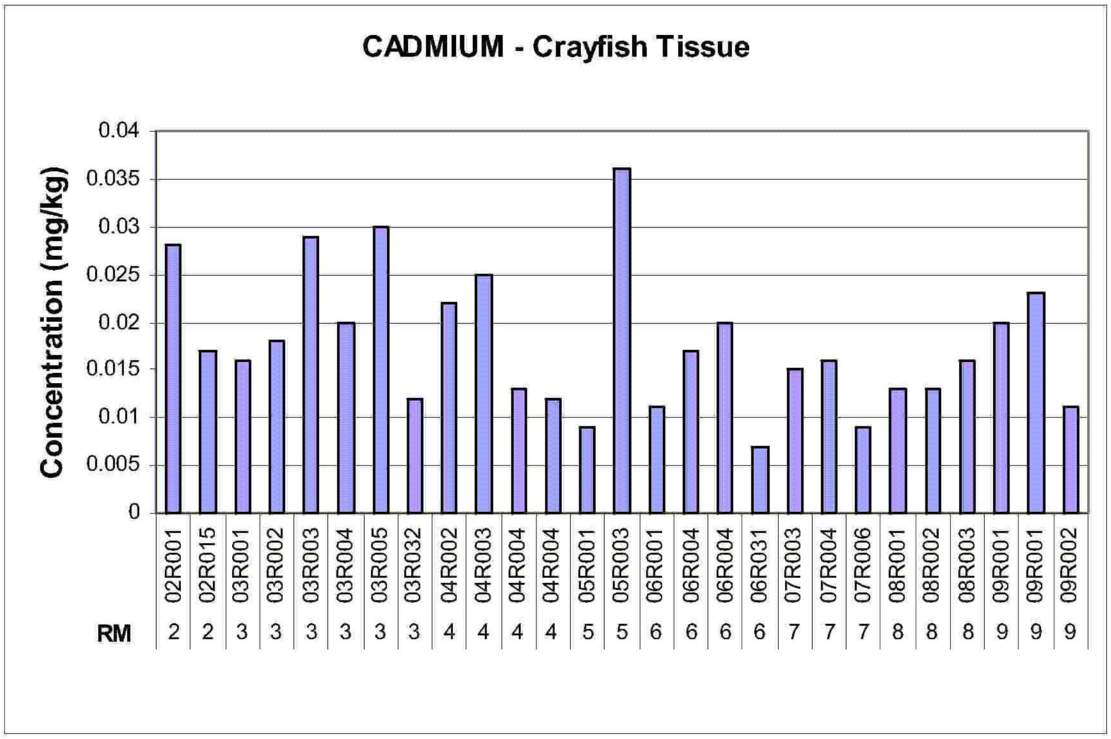
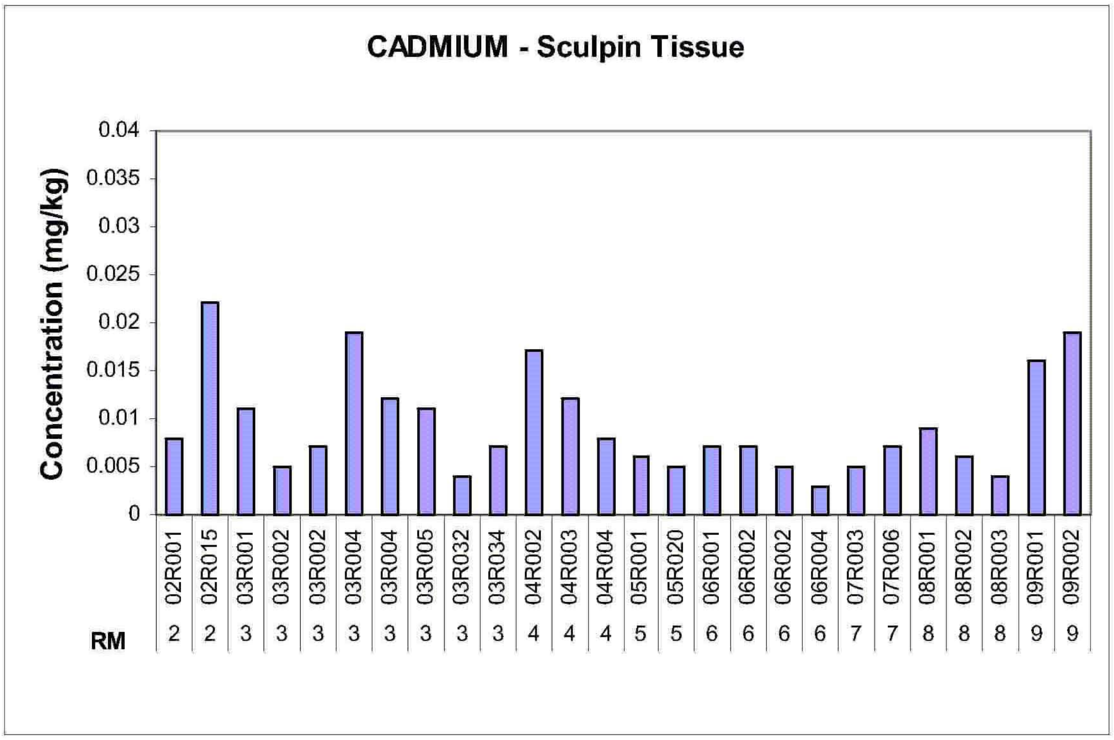


Figure 4-30. Crayfish and Sculpin Whole-body Tissue Indicator Chemical Concentrations by River Mile. When a chemical was not detected, the detection limit was used (highlighted in yellow).





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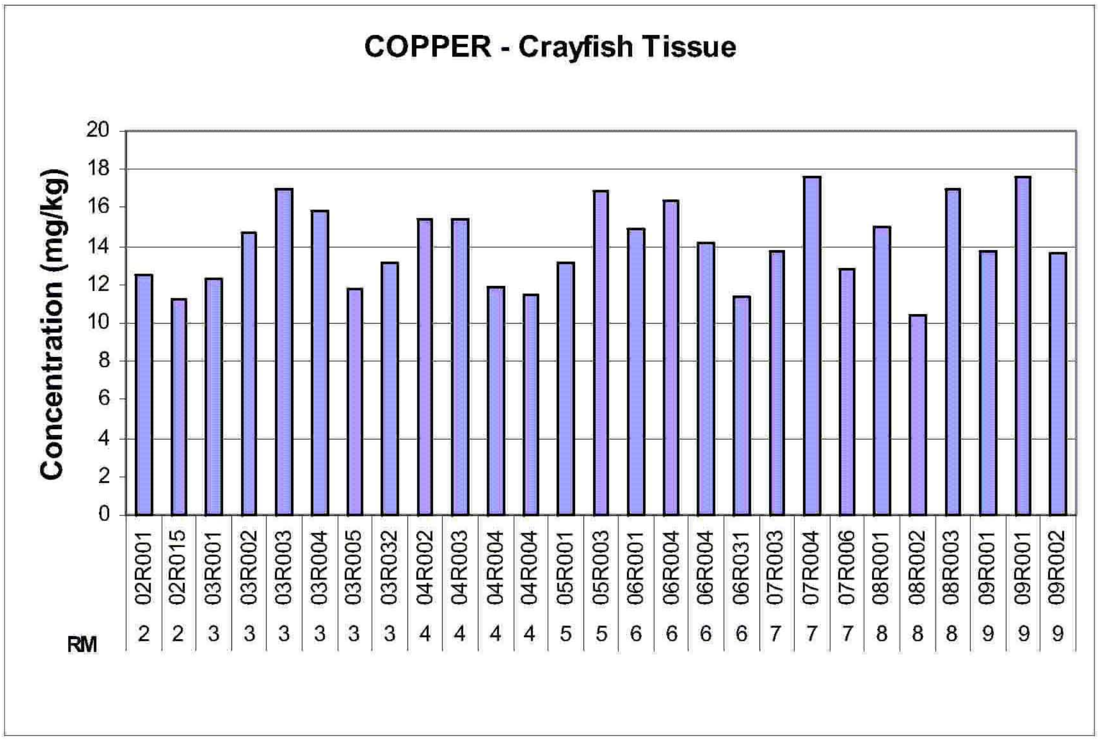

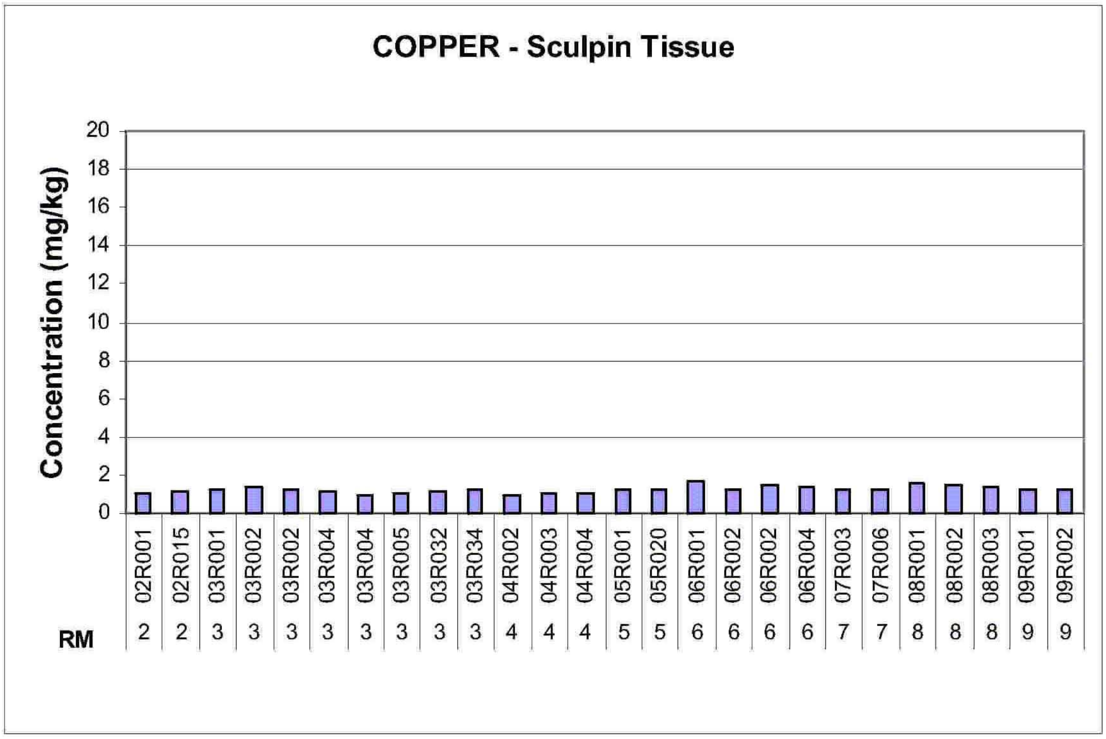

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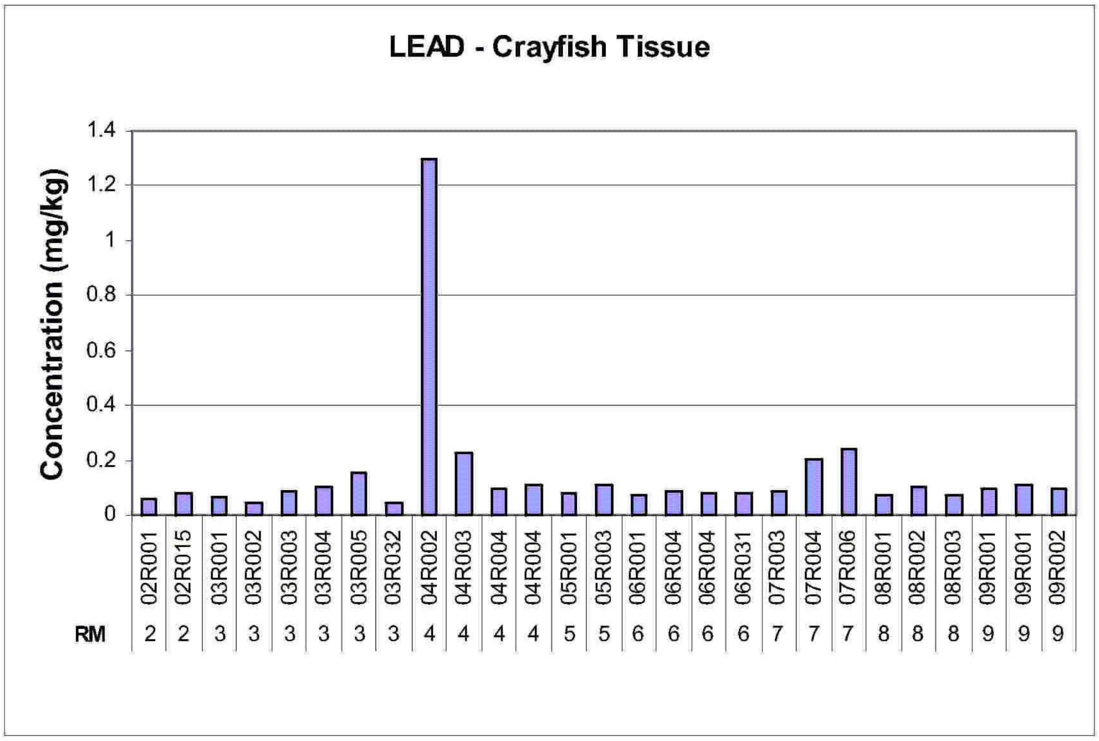

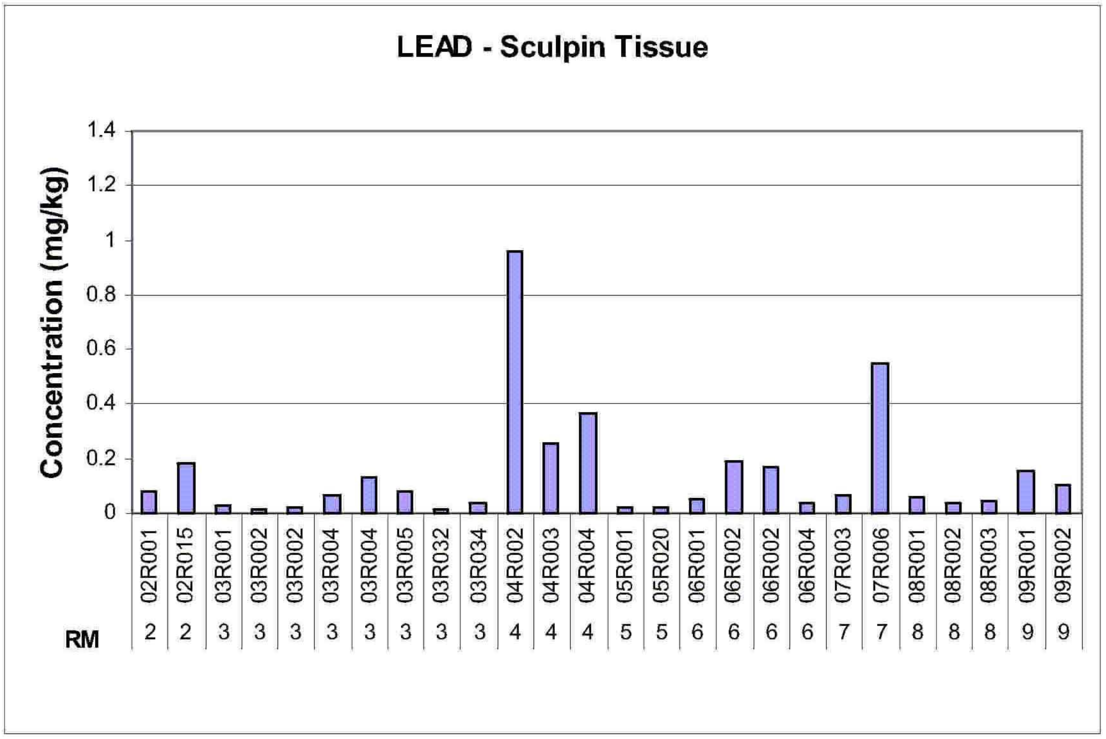

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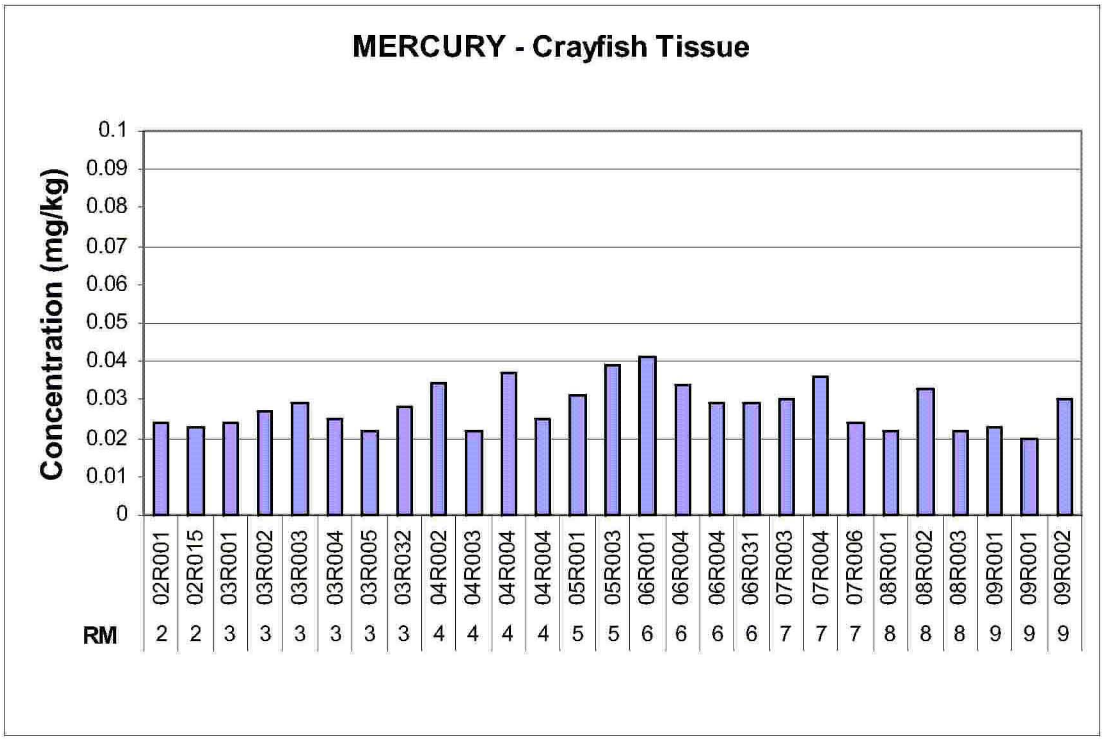

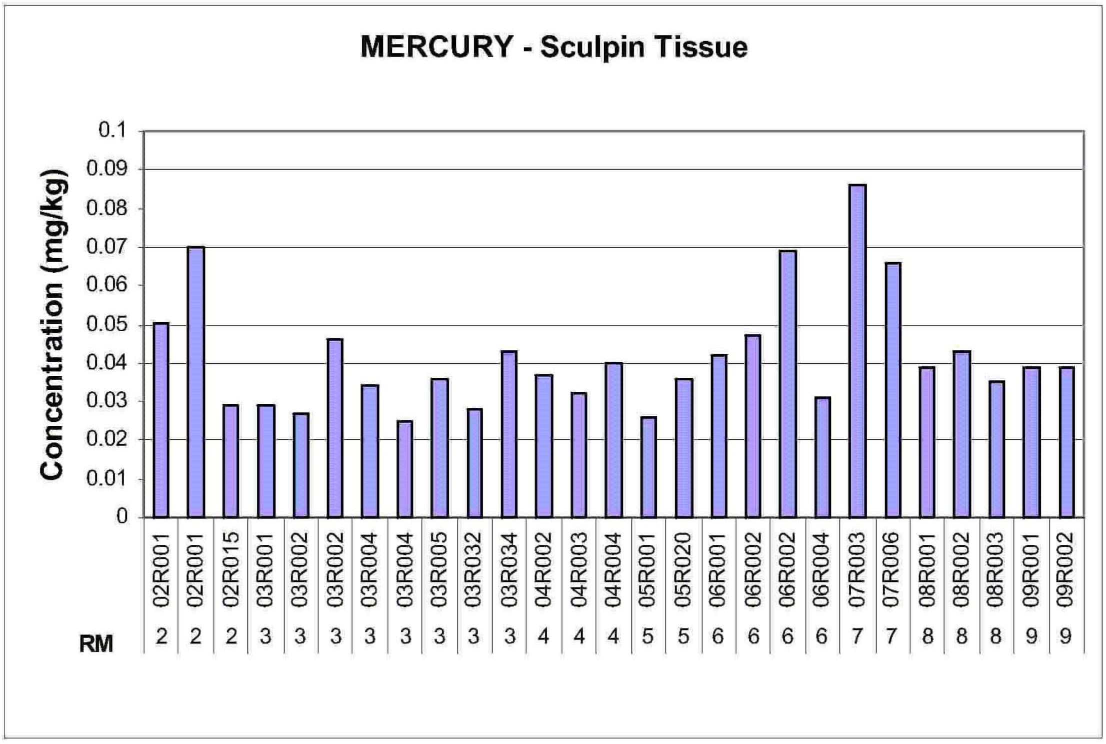

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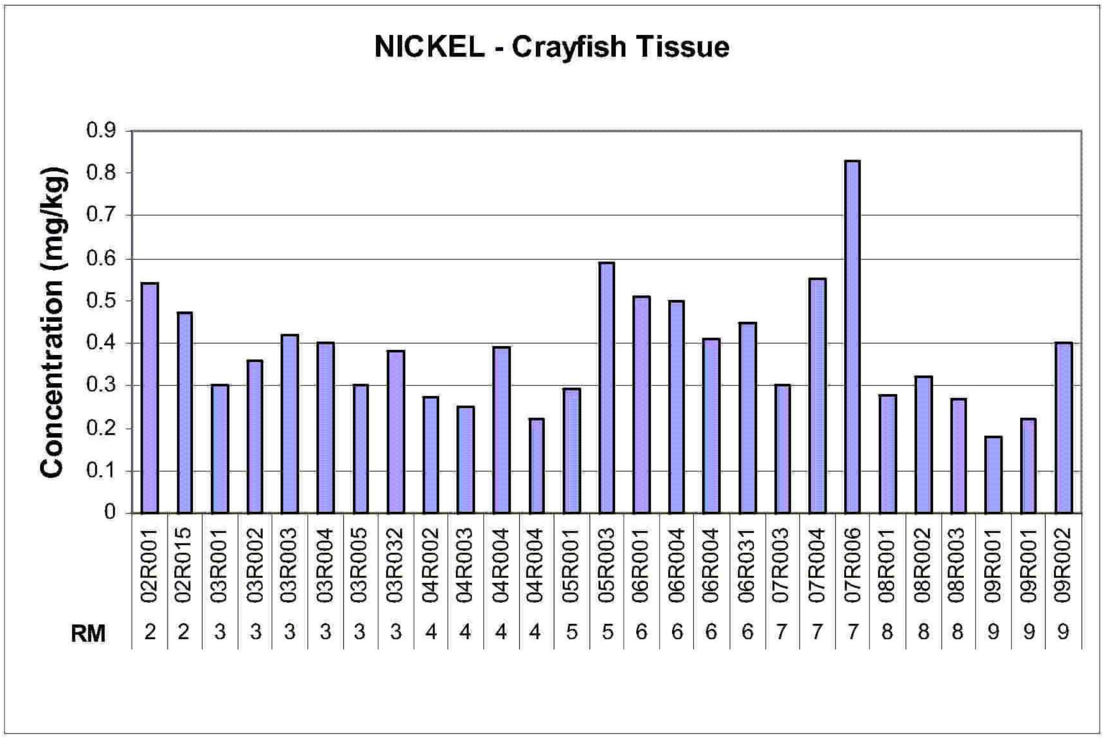

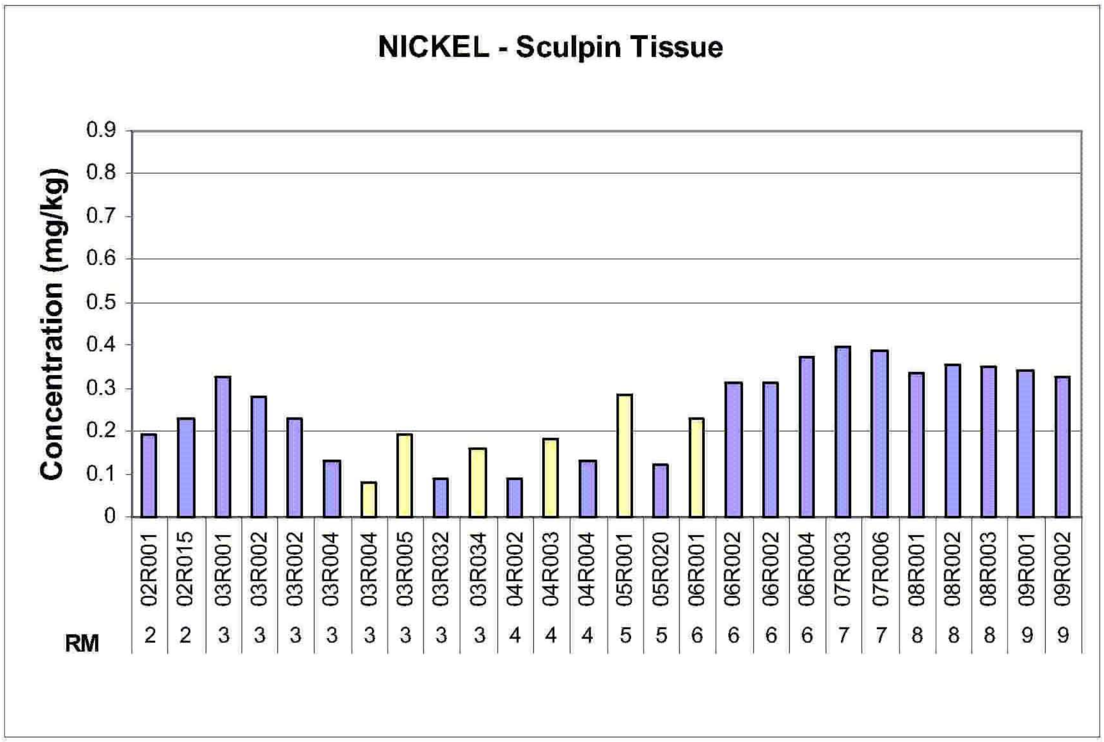

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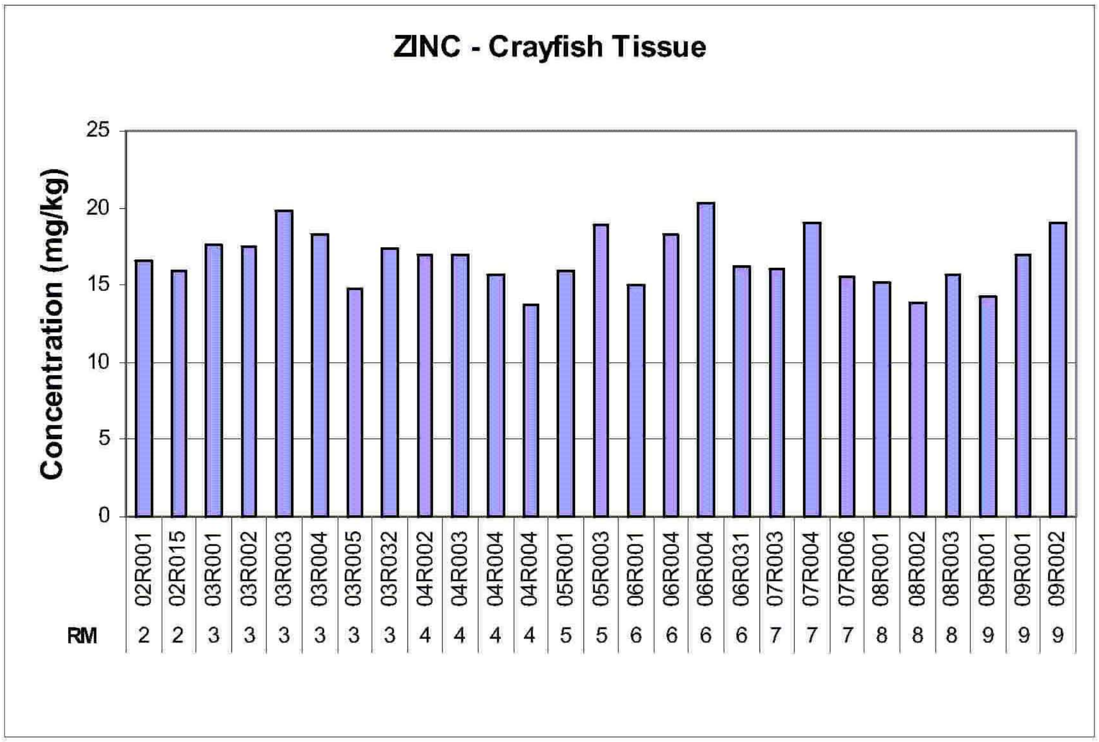

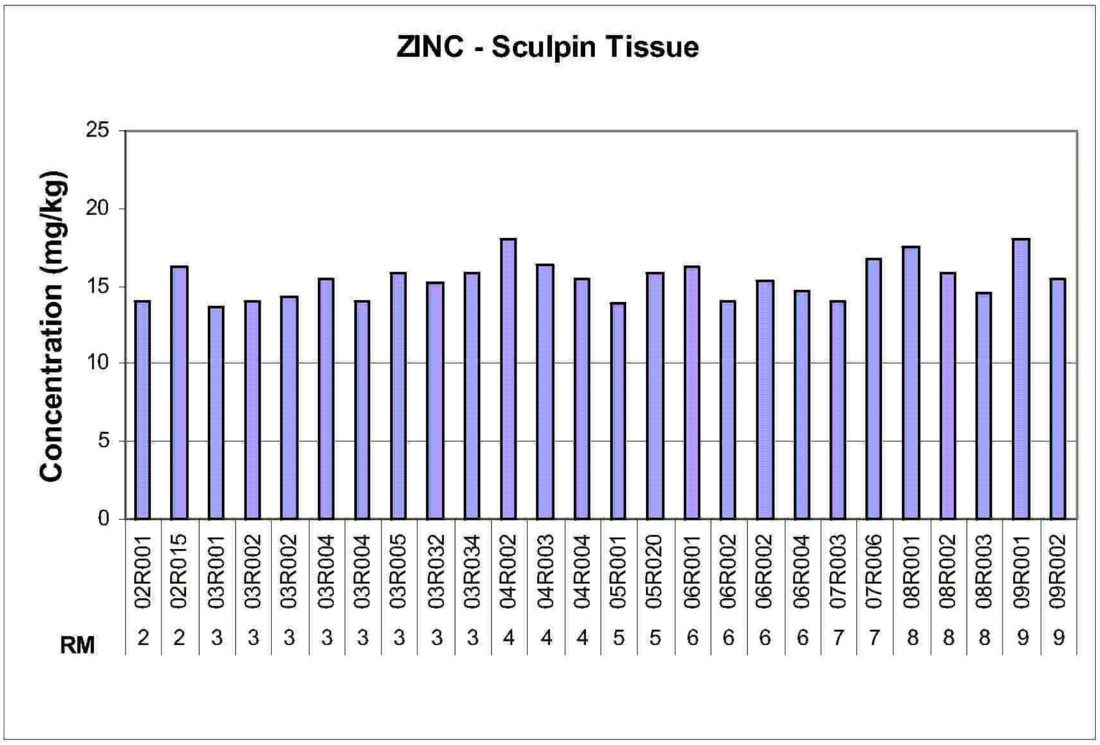

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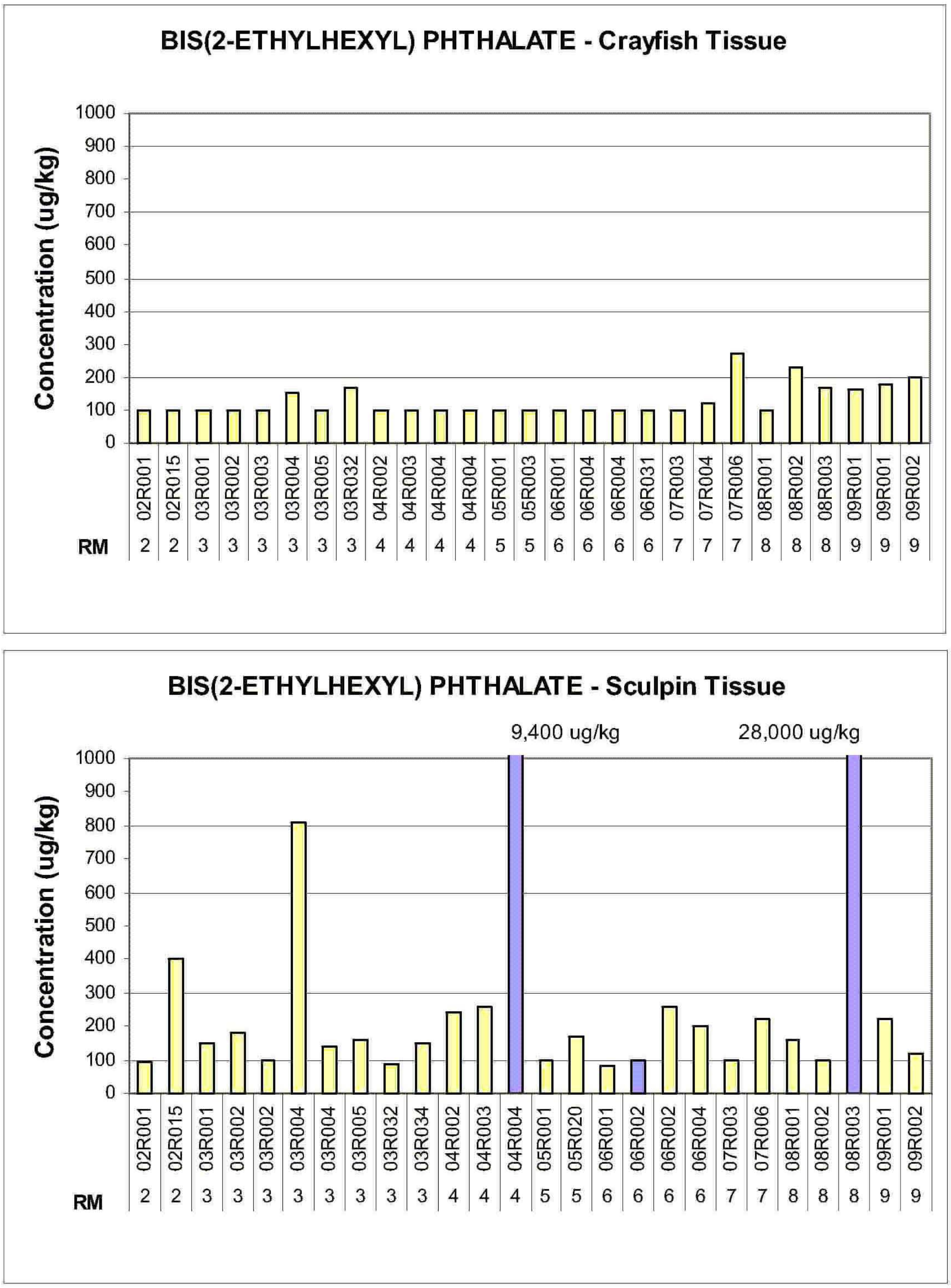

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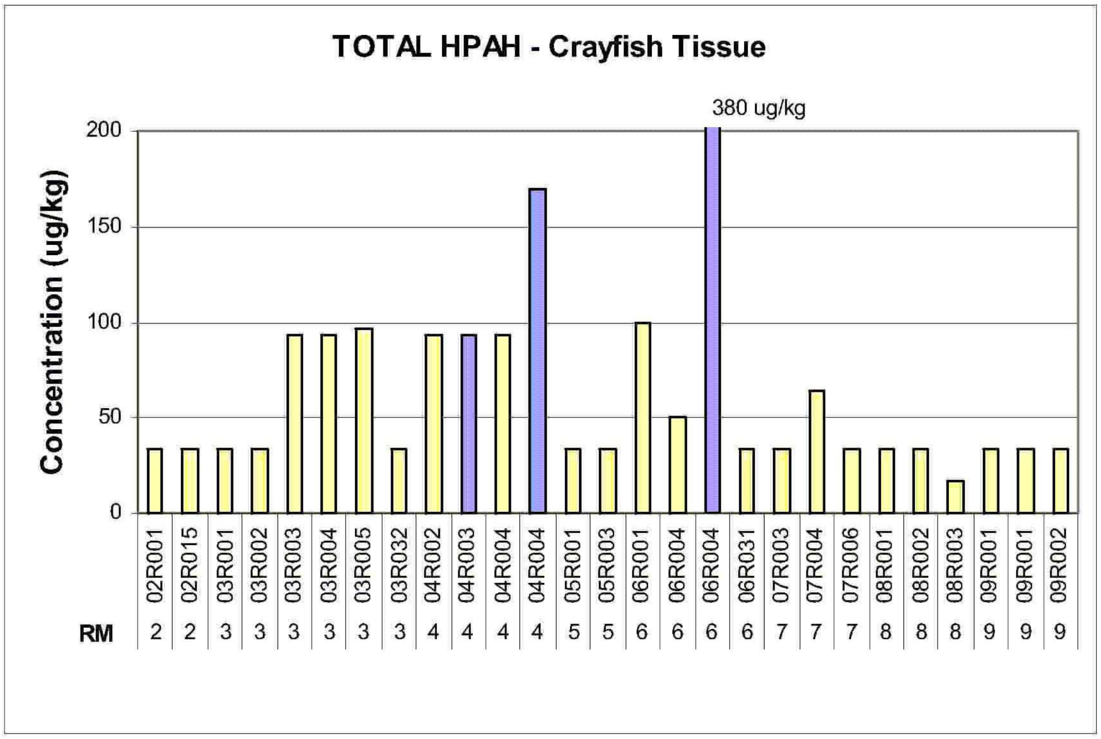

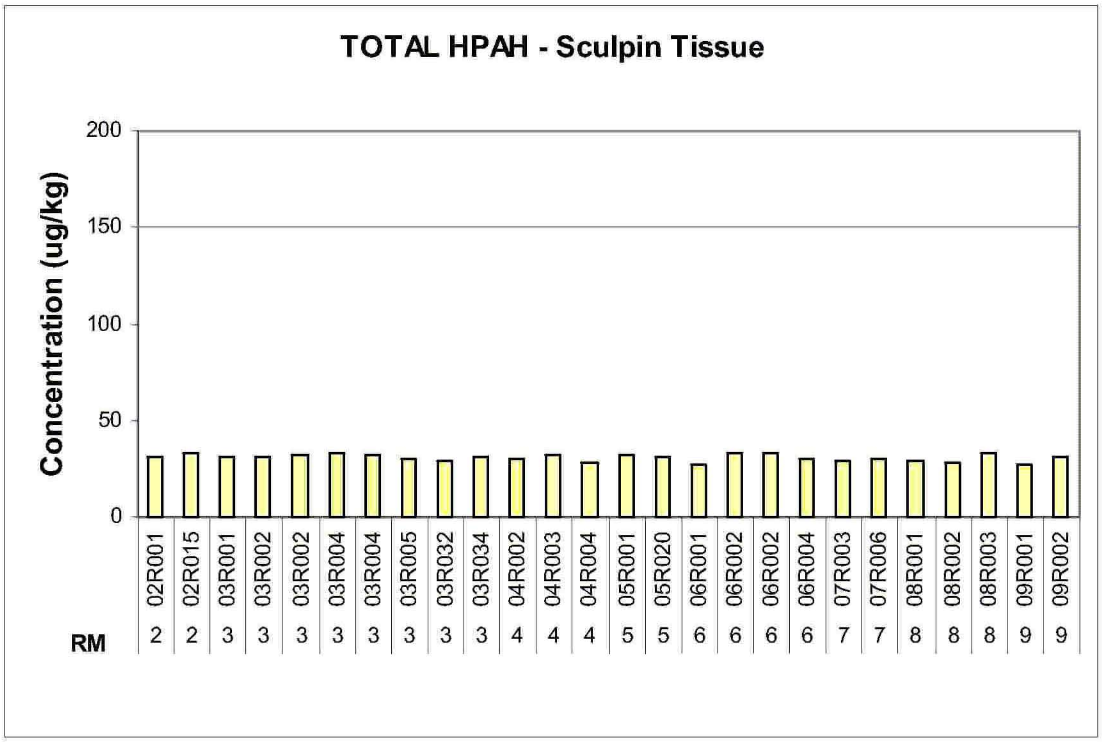

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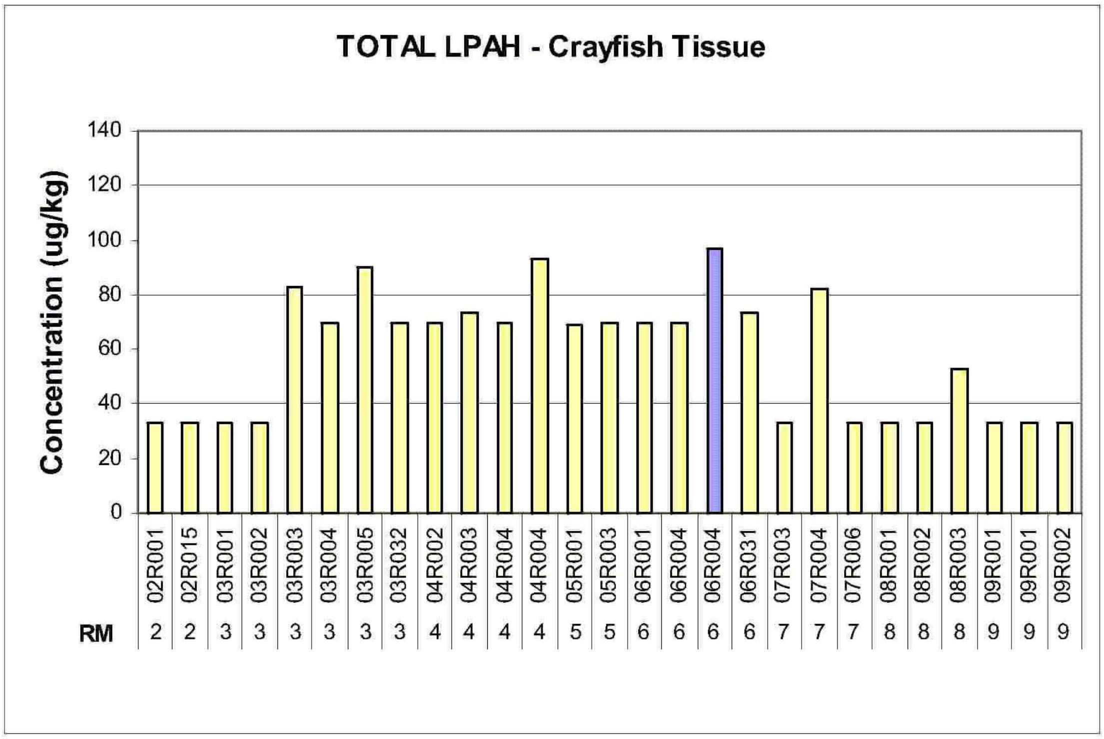

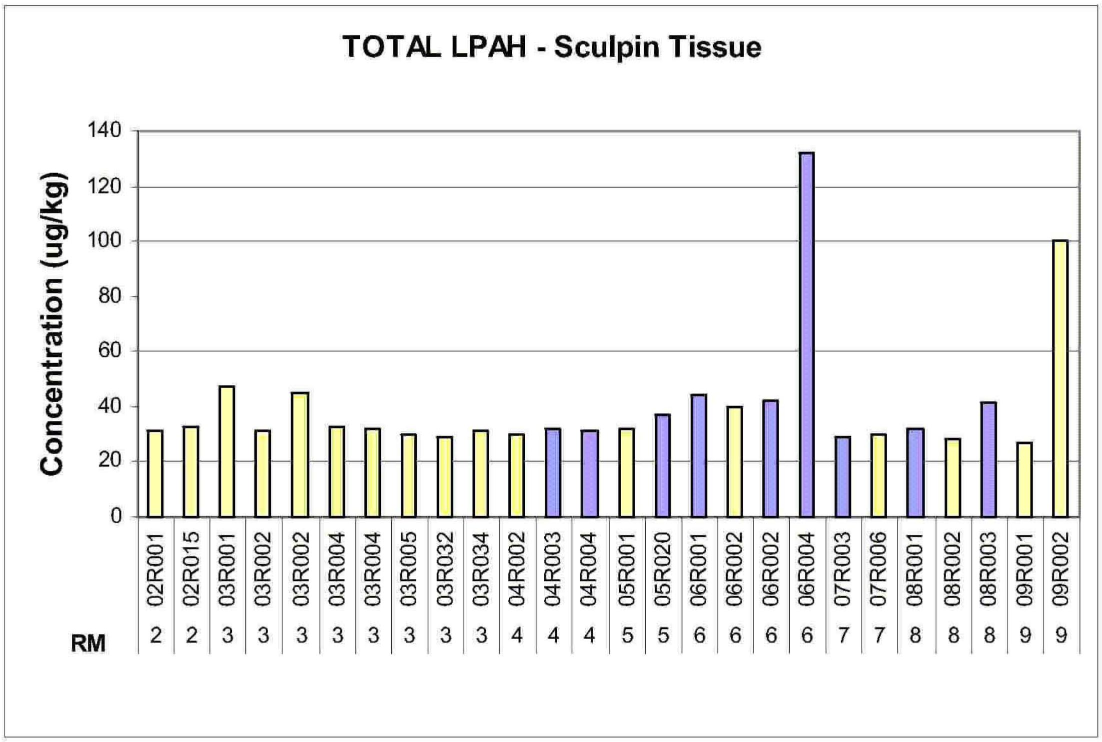

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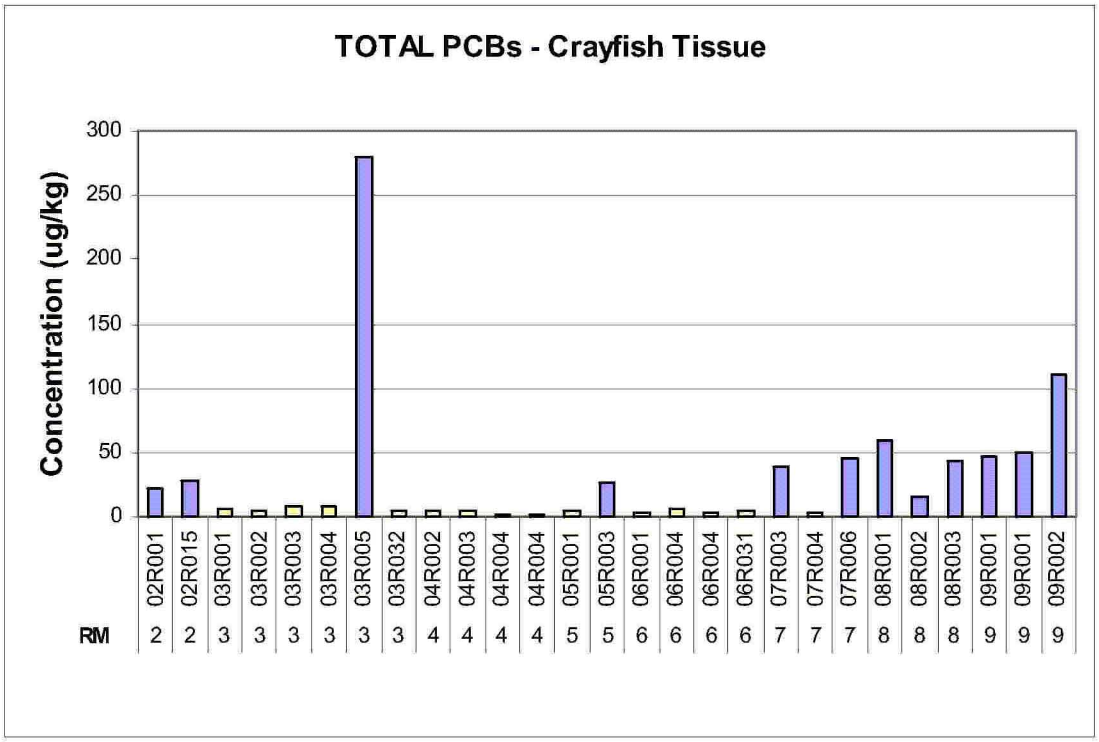

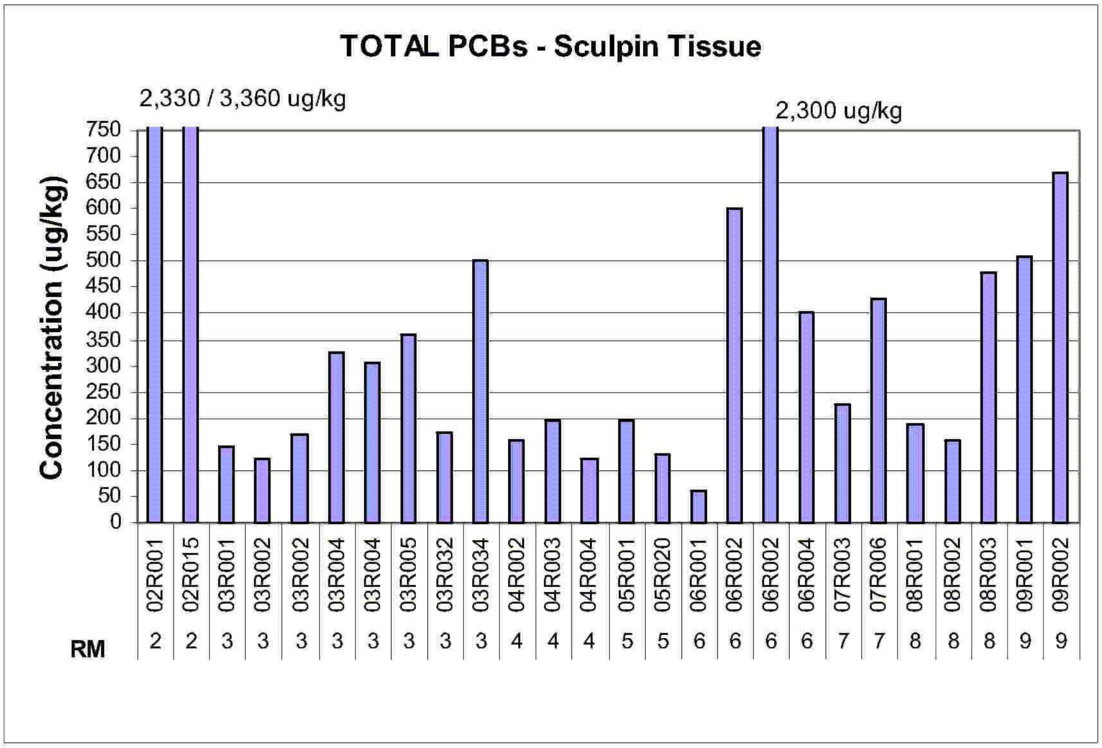

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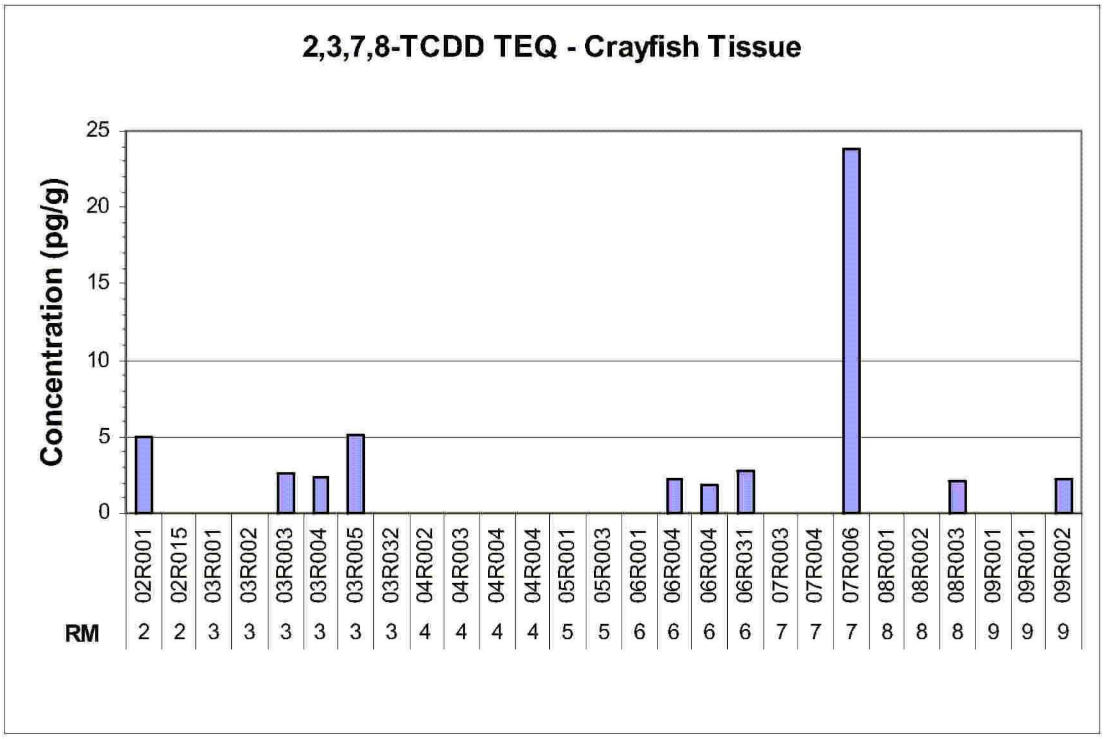

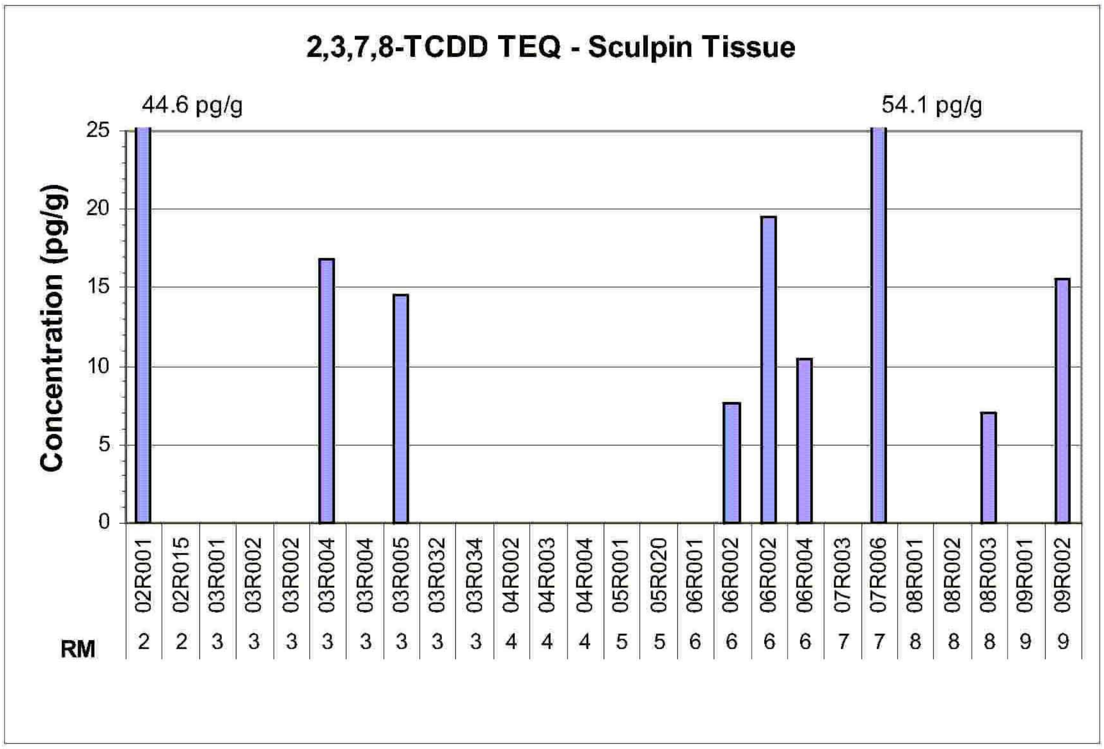

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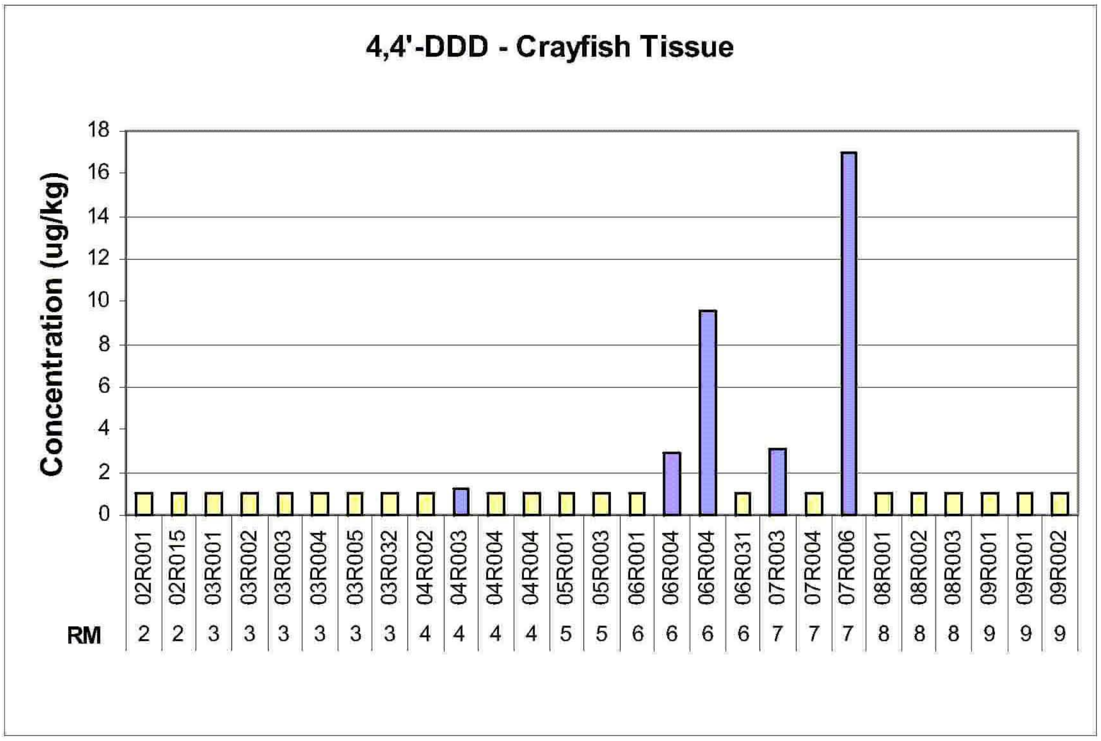

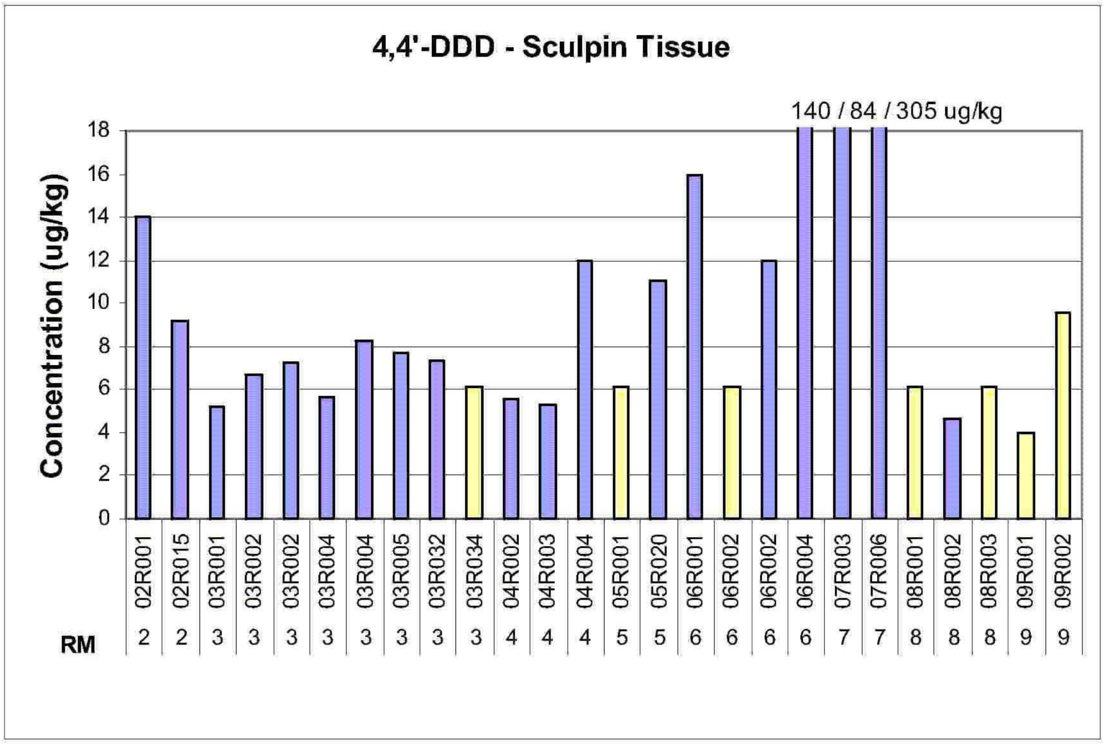

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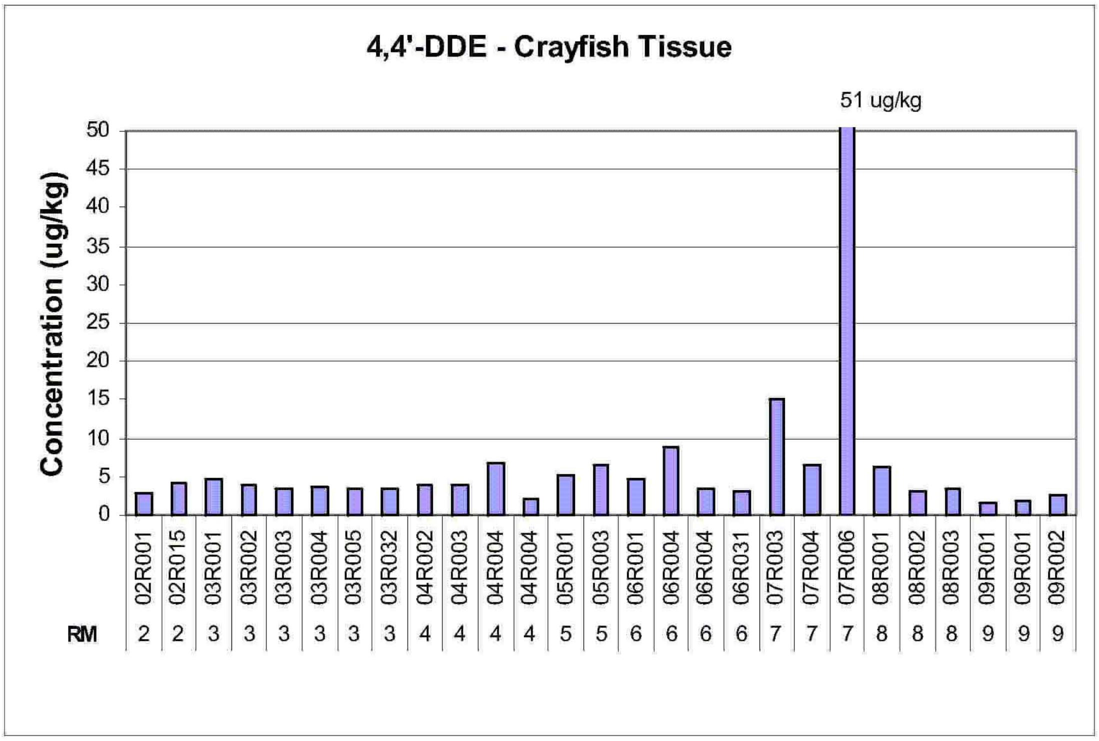

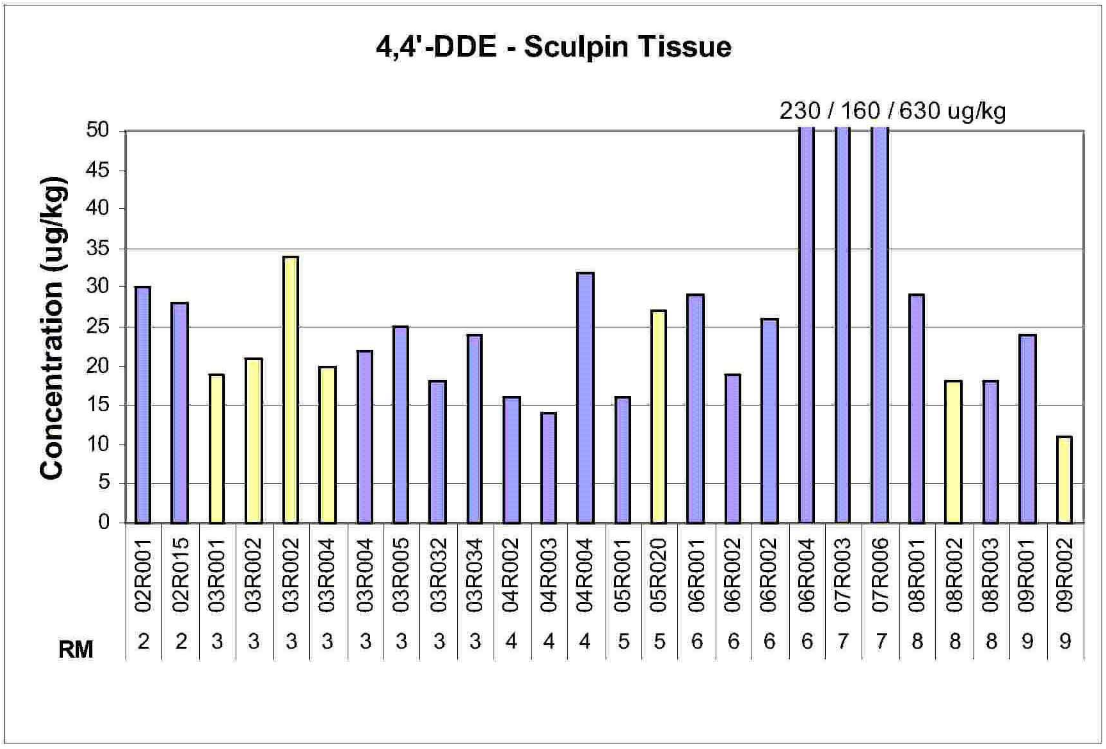

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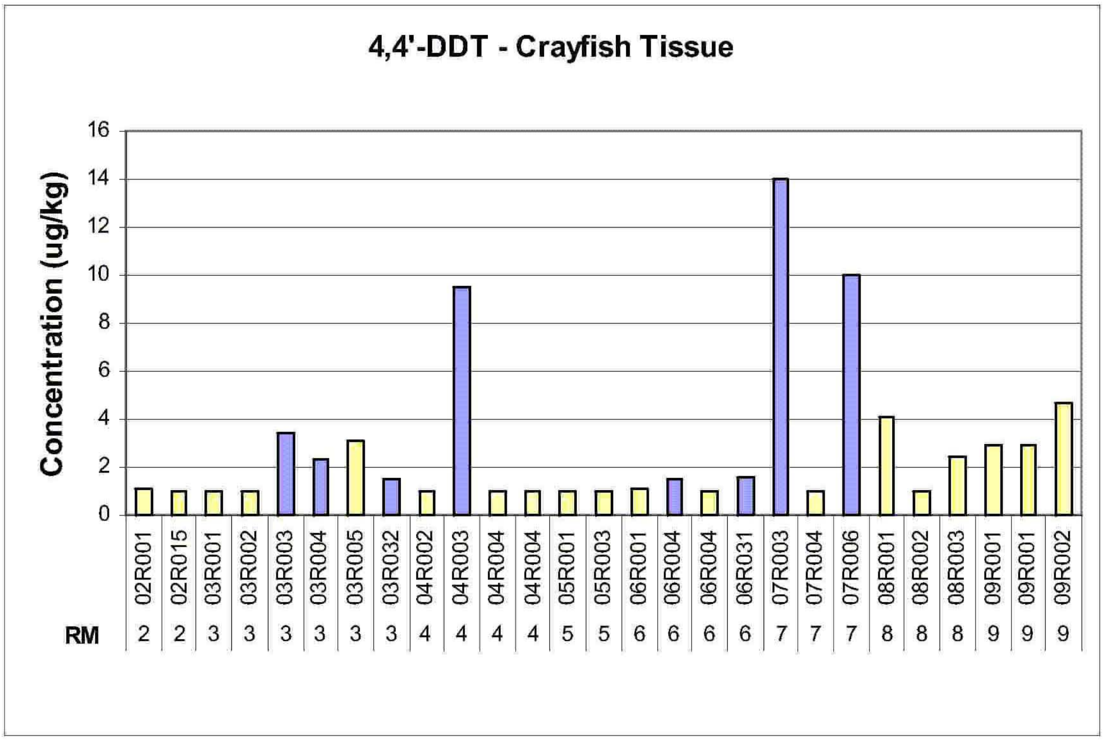

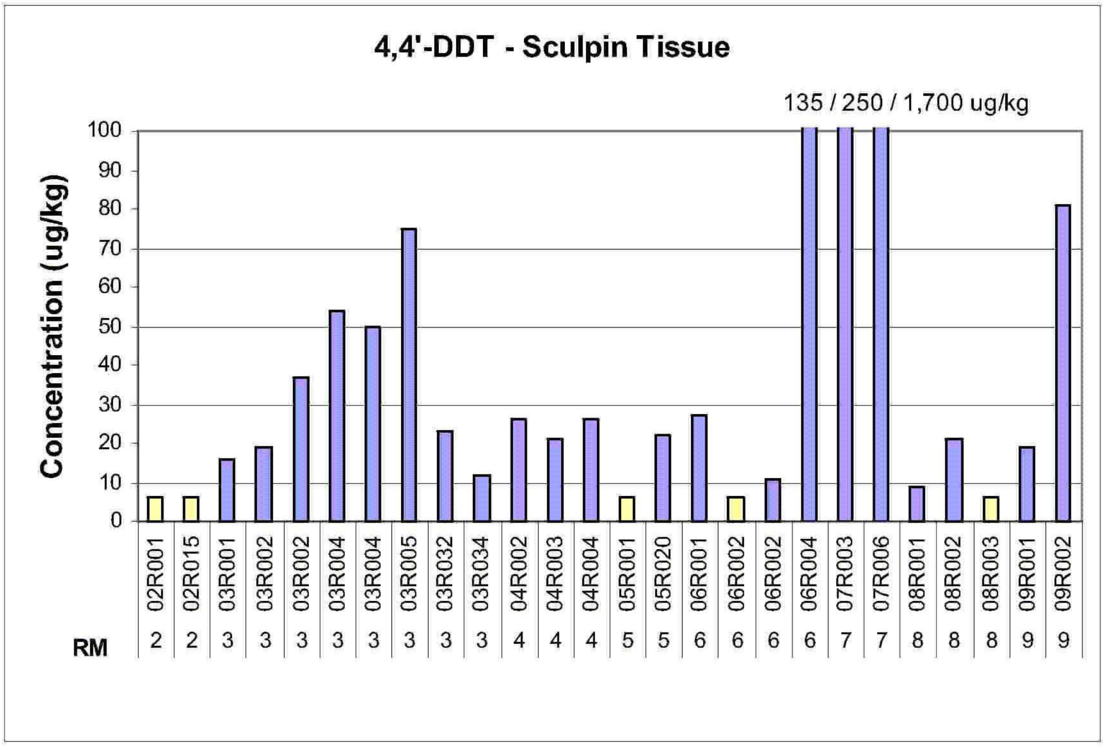

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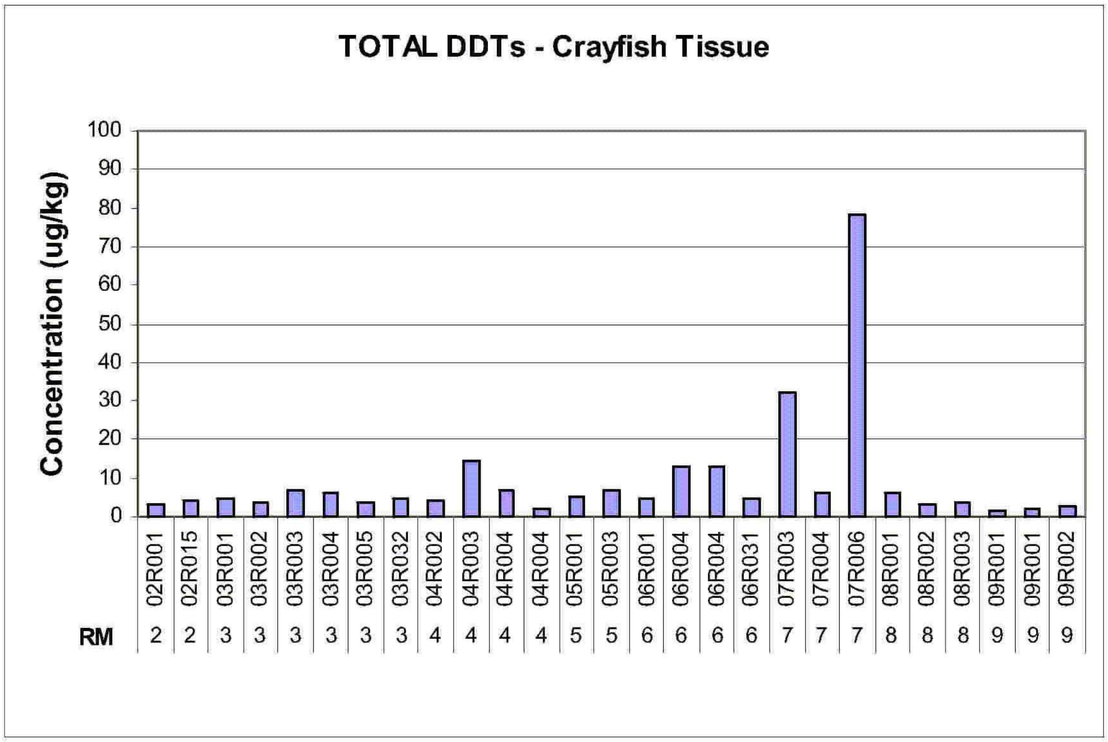

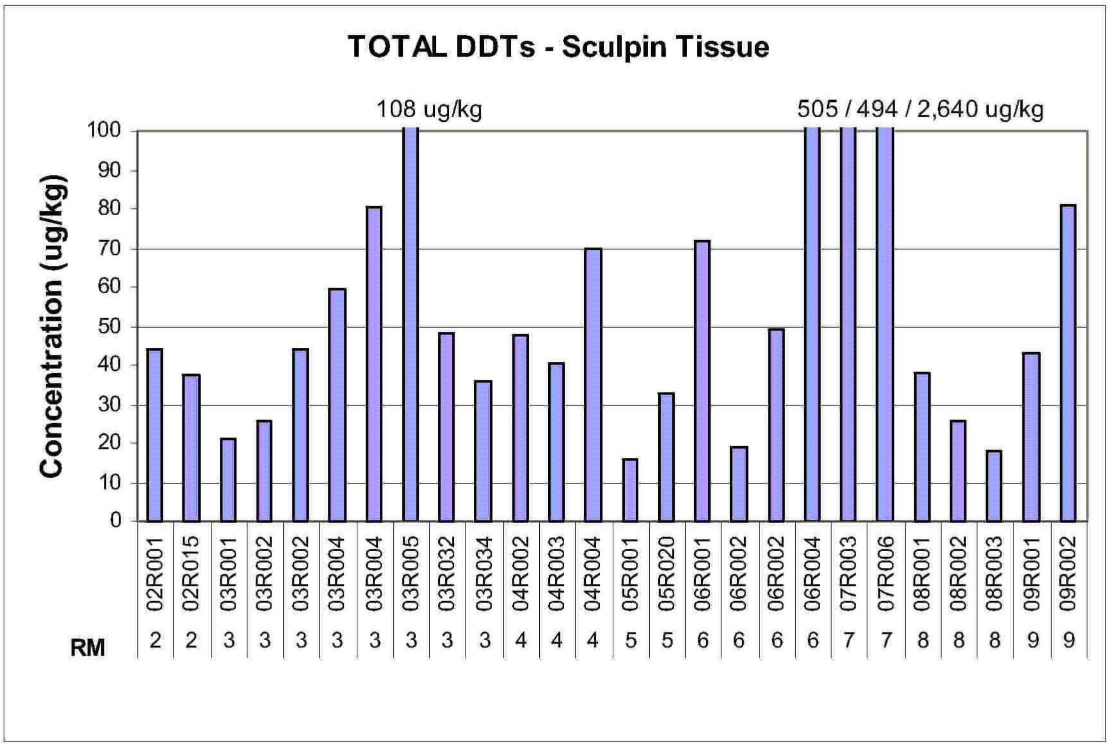

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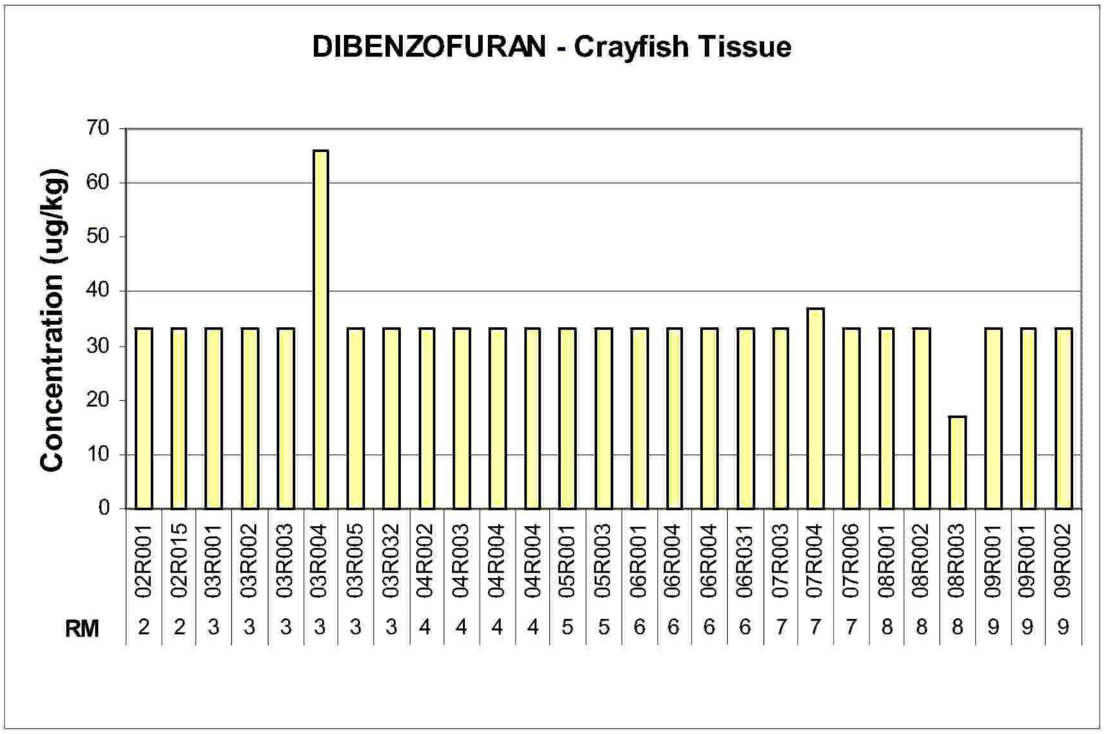

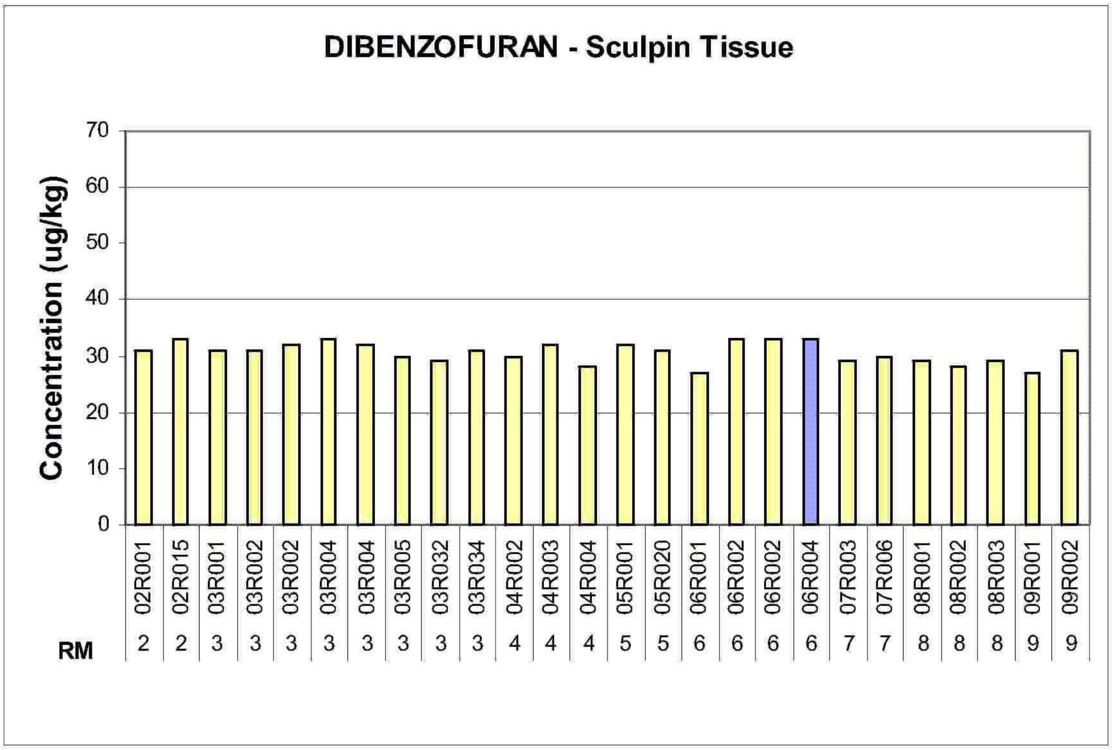

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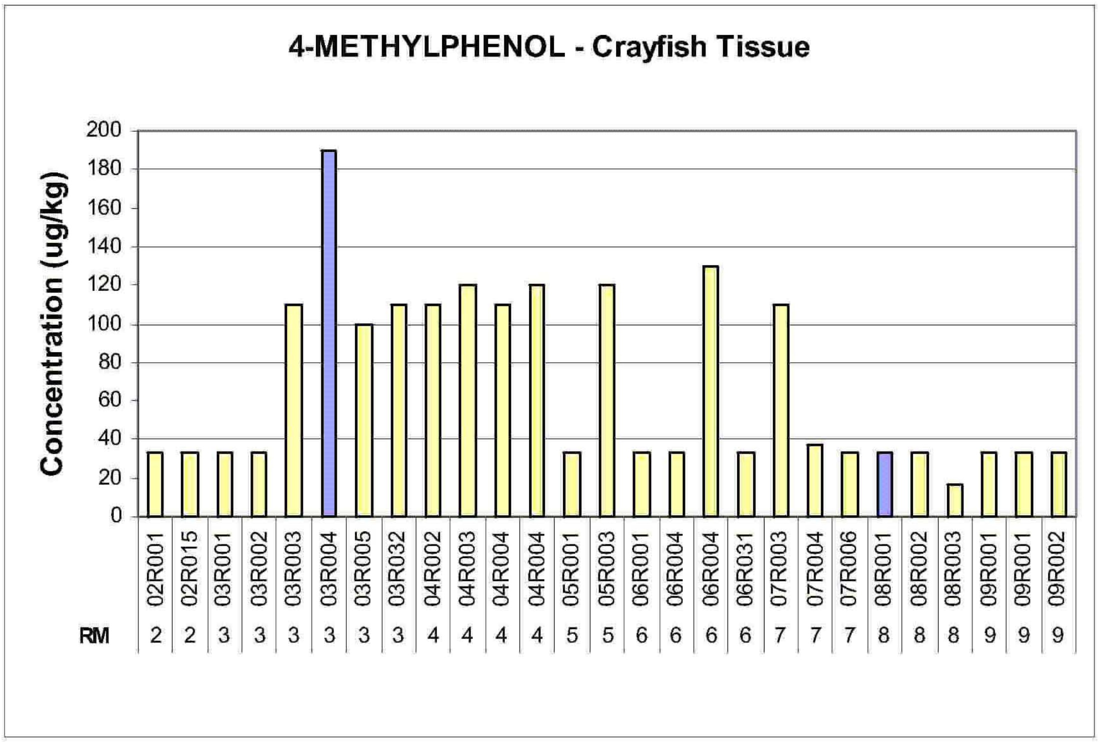

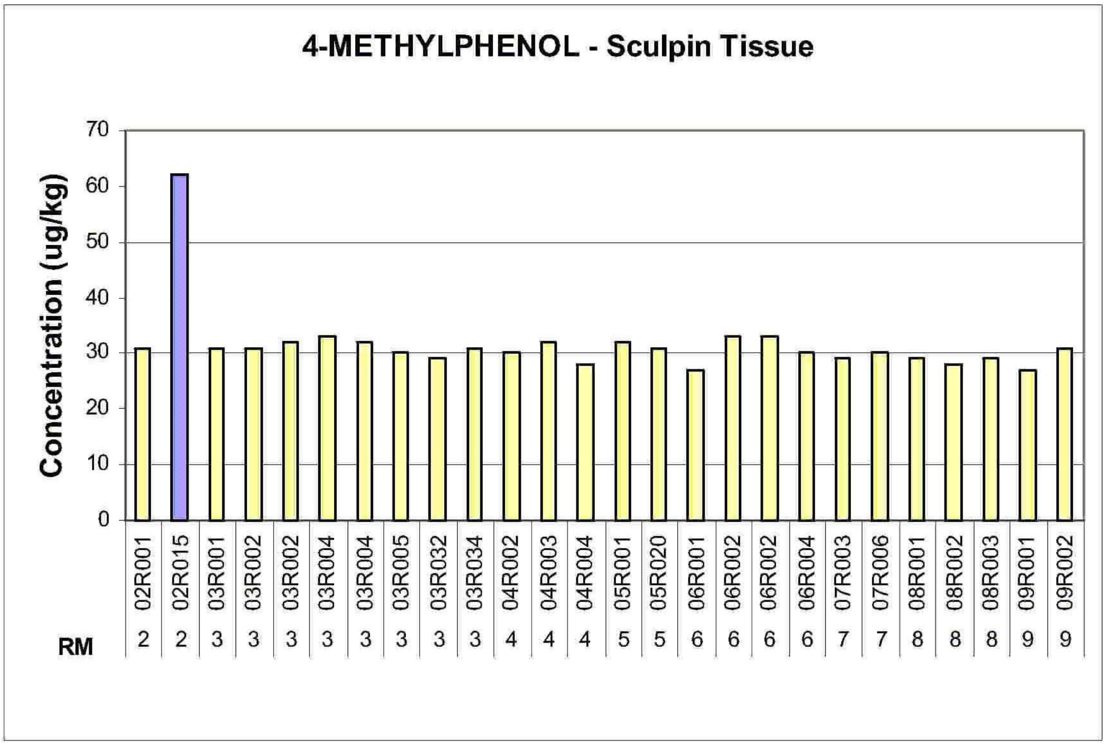

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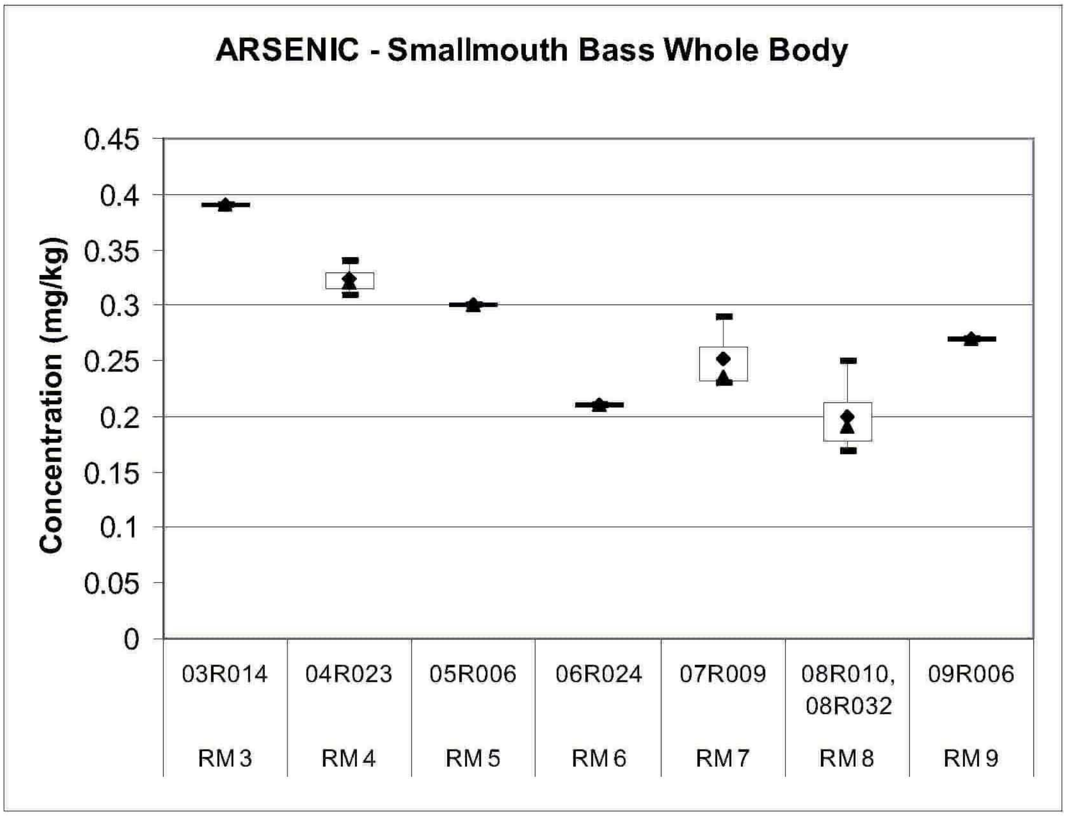


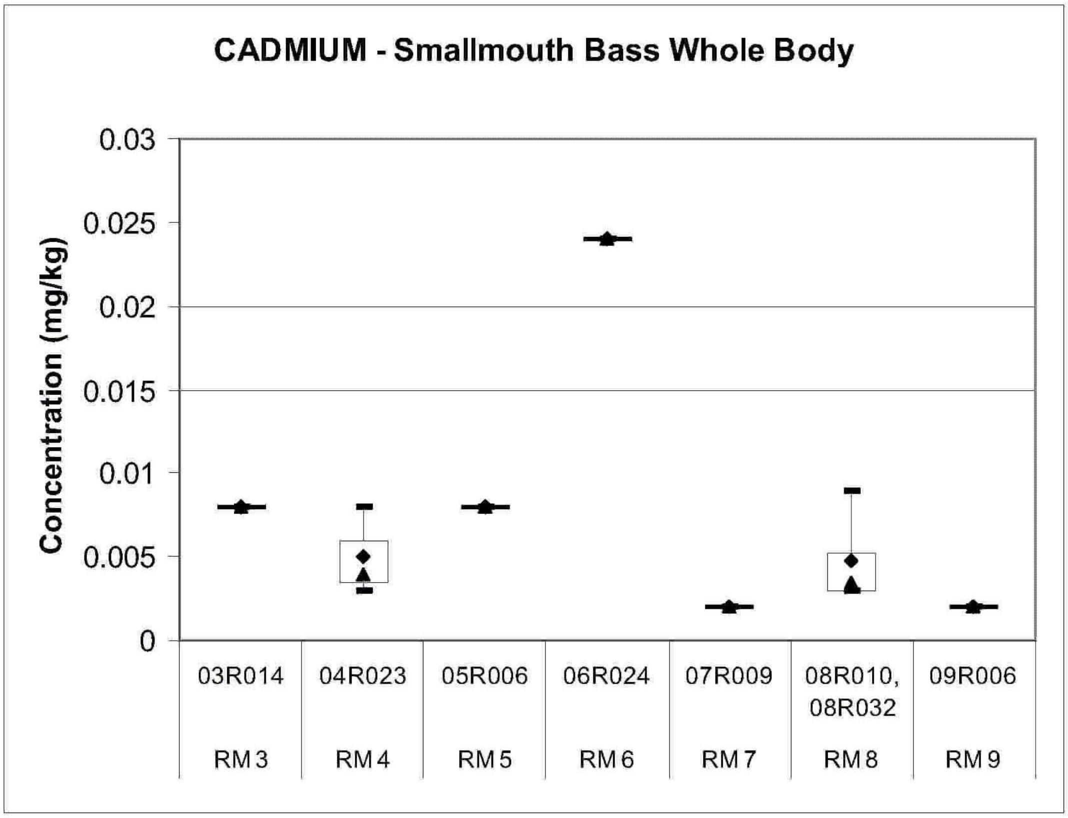
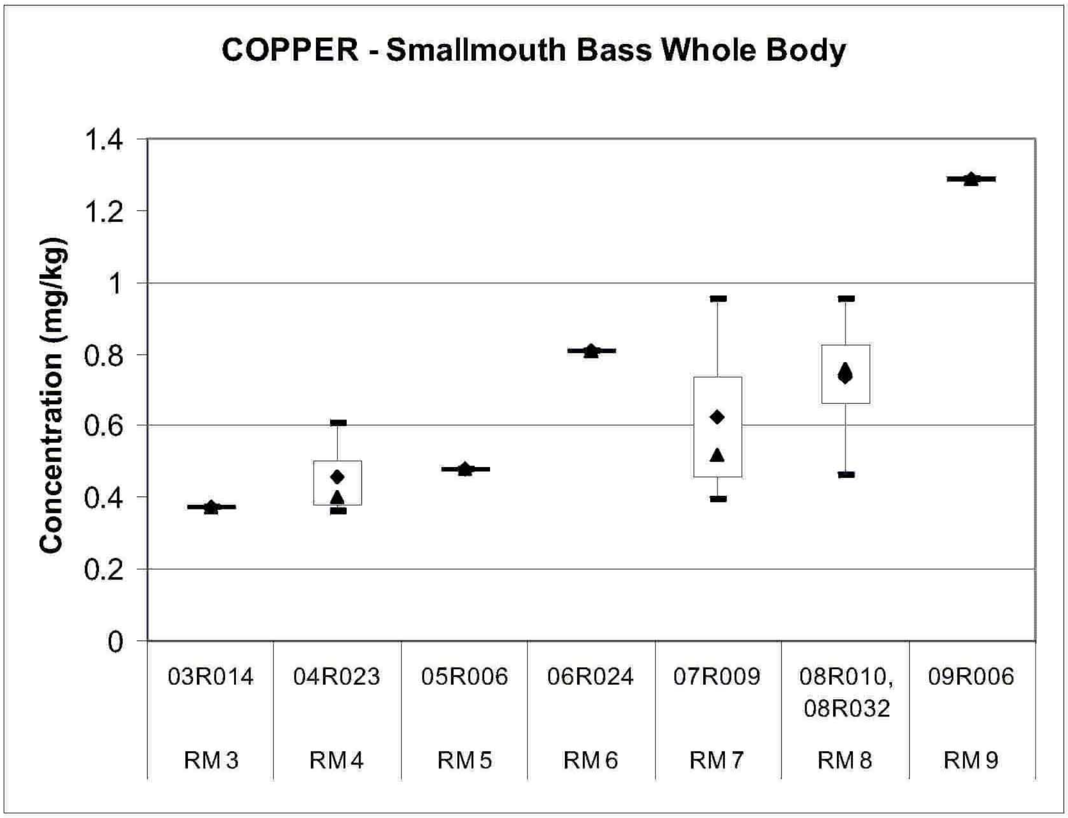
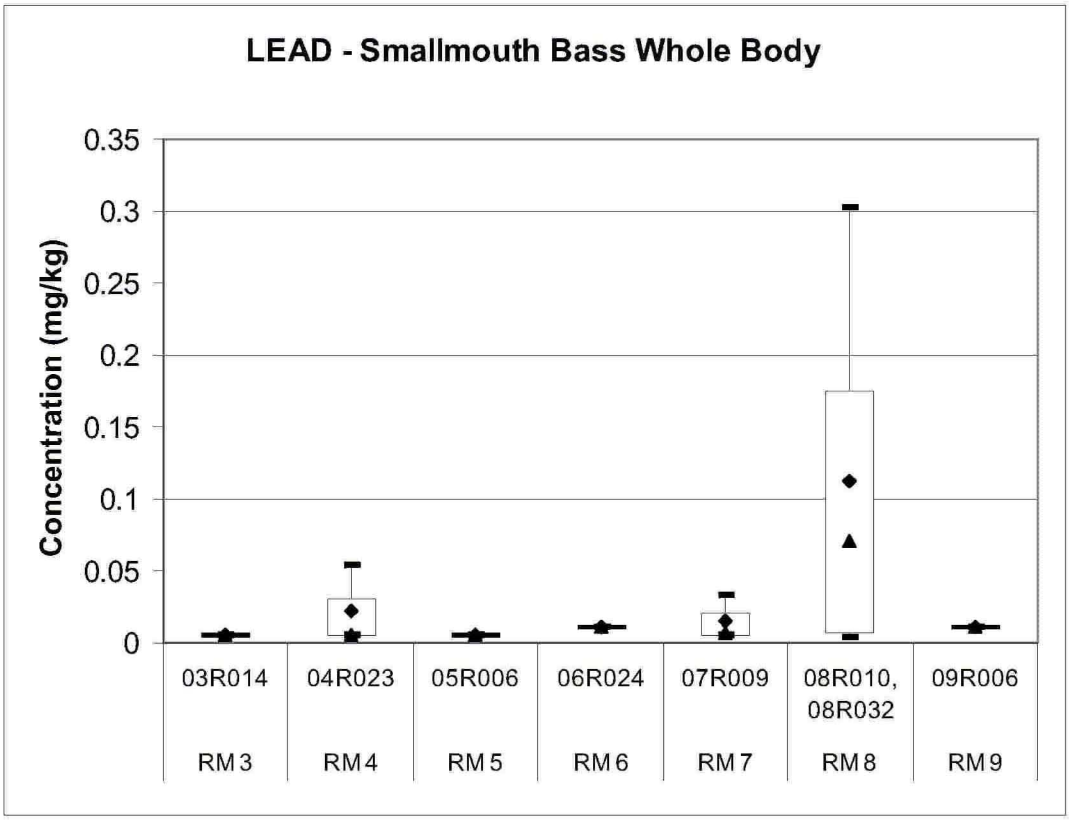


Figure 4-31. Box Plots of Smallmouth Bass Whole-body Tissue Indicator Chemical Concentrations. When a chemical was not detected, the detection limit was used.





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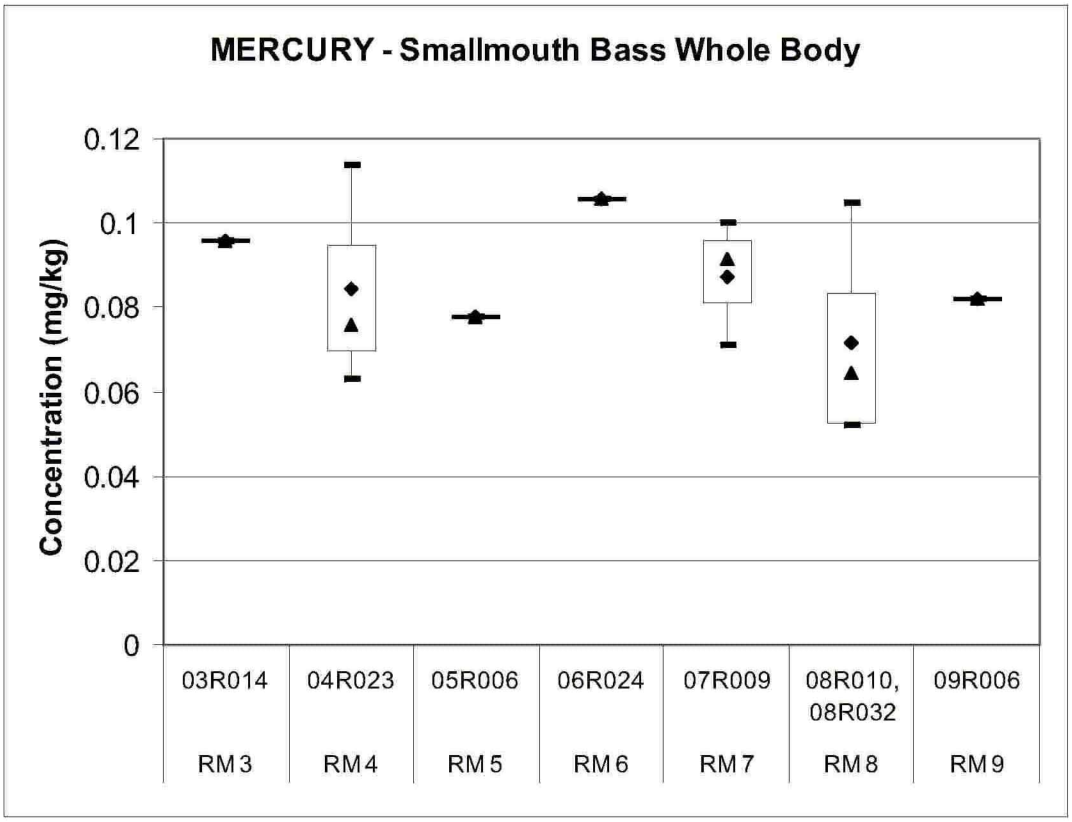

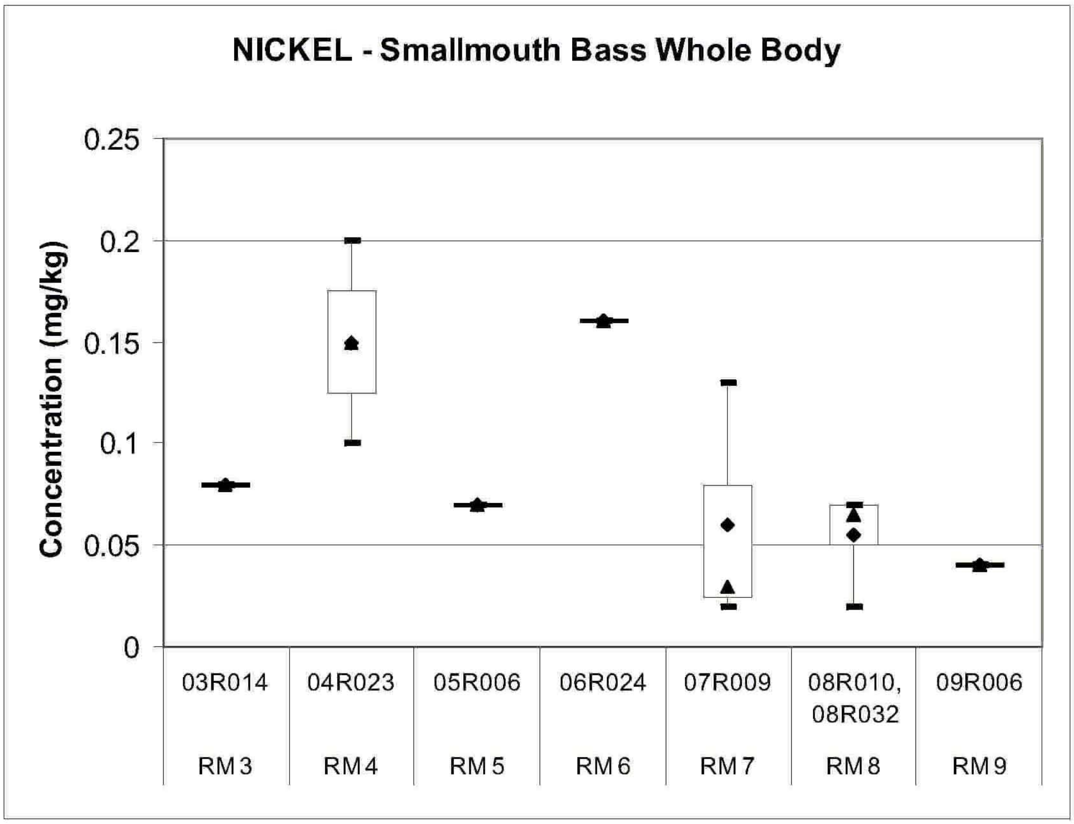

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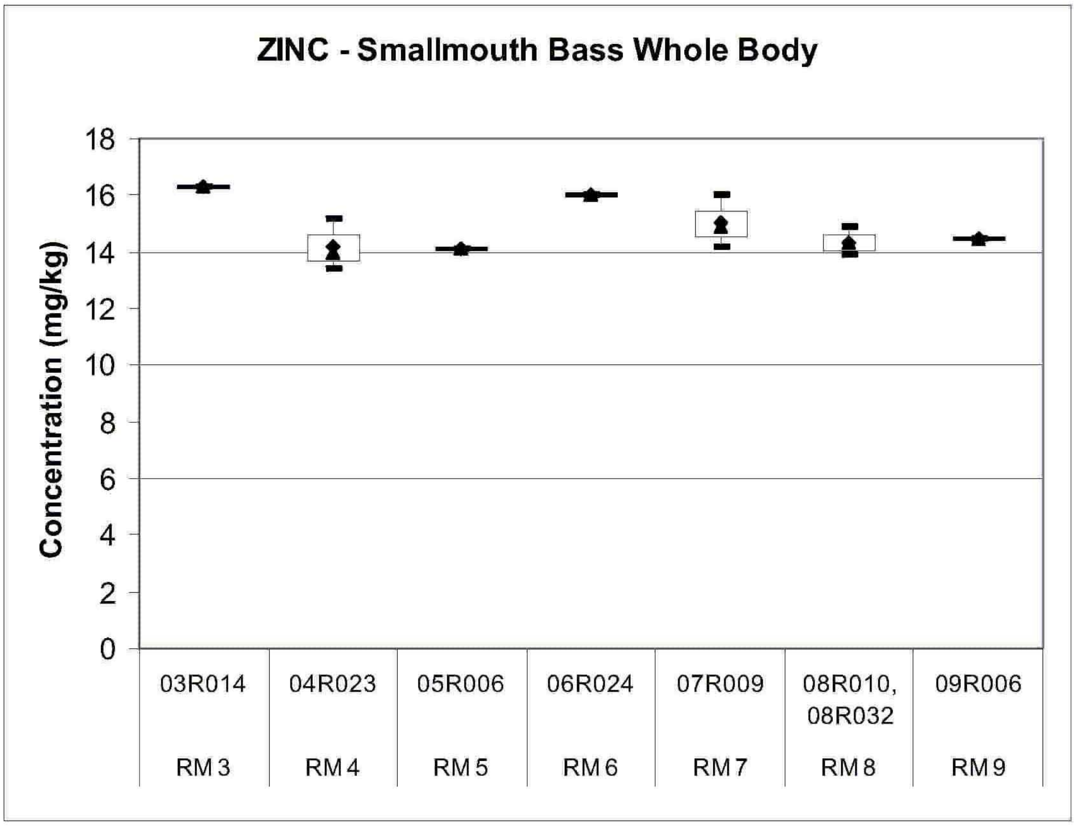

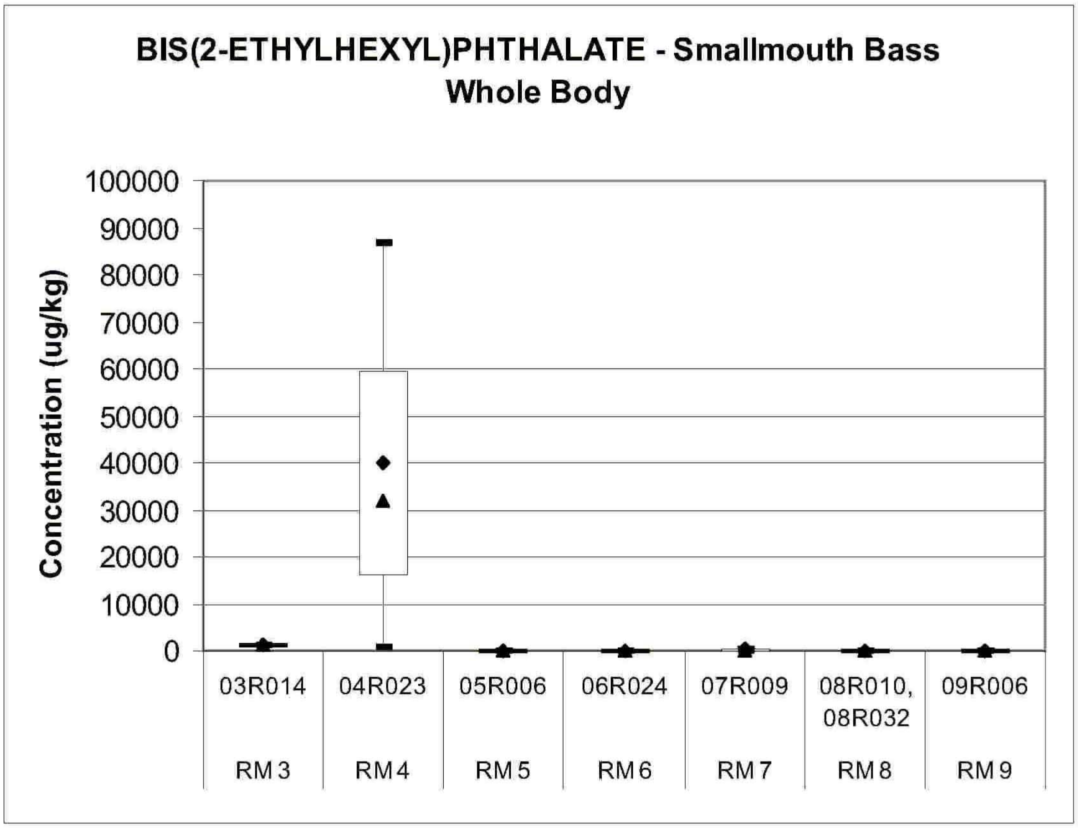

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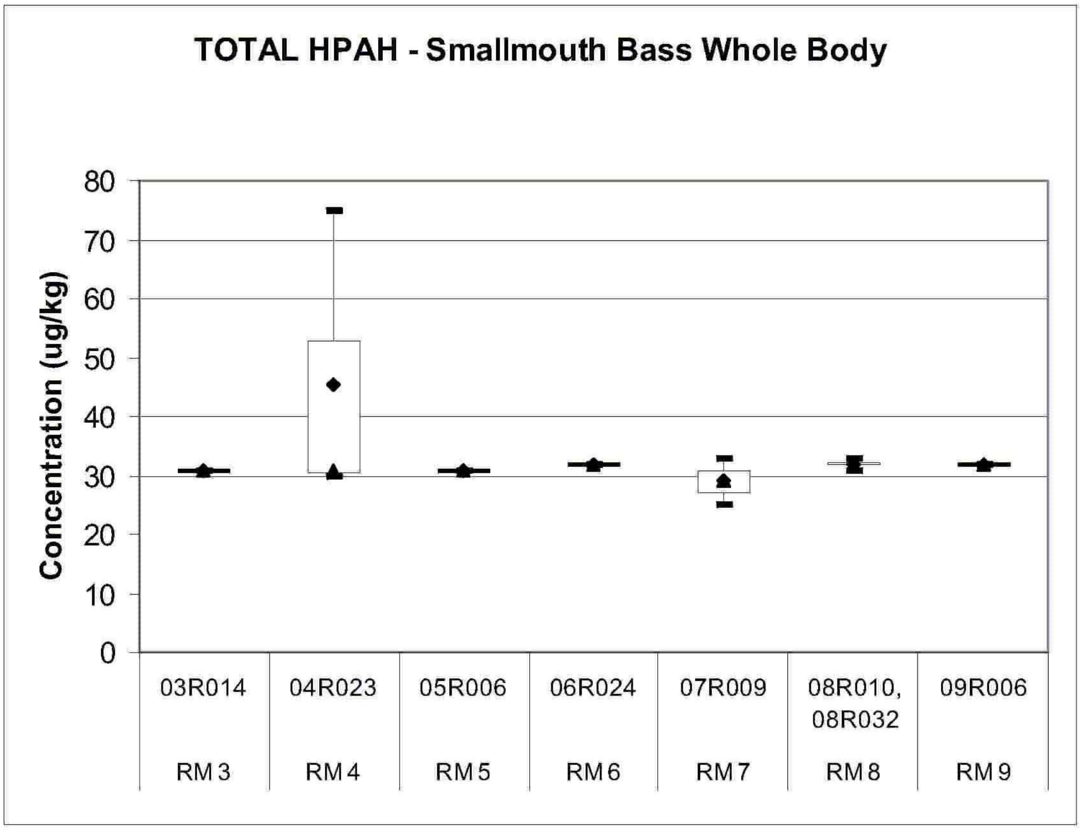

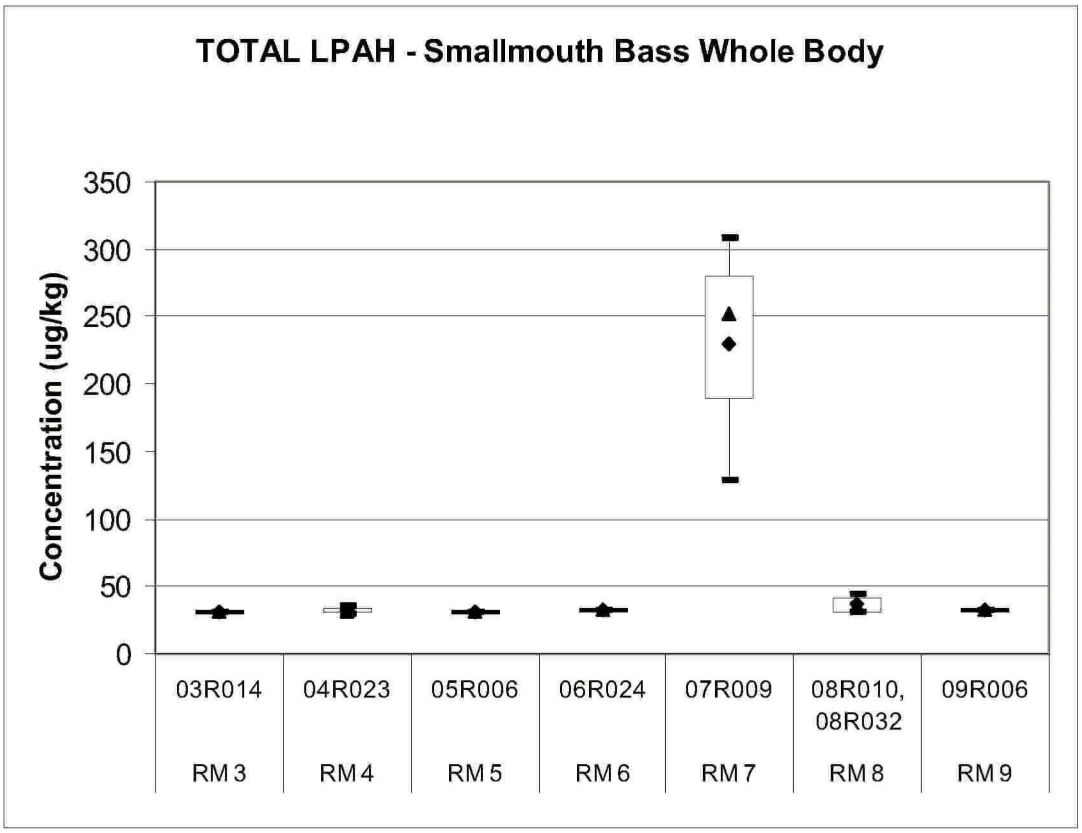

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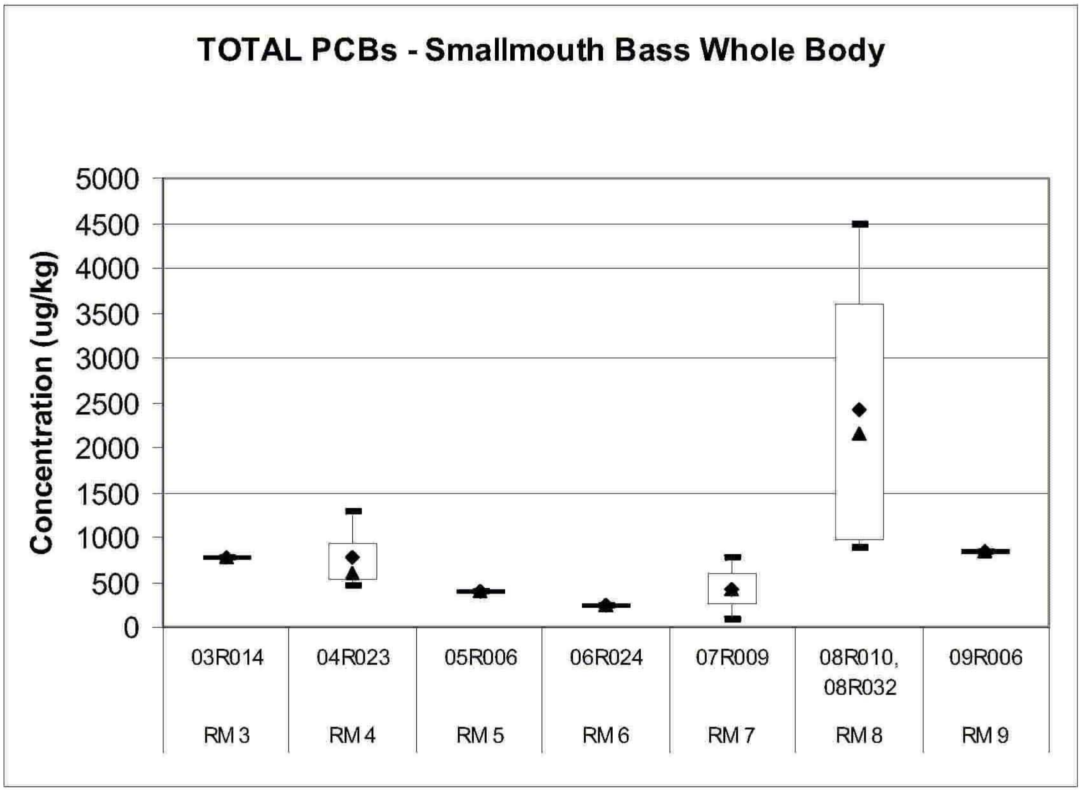

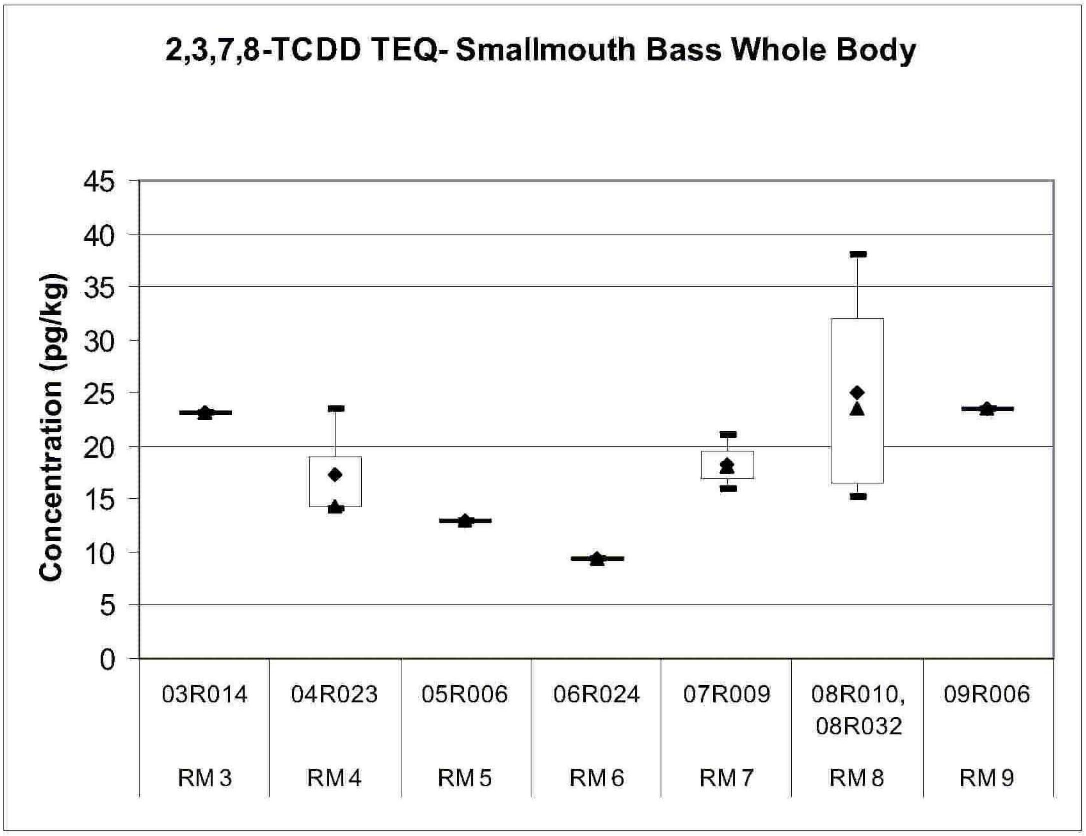

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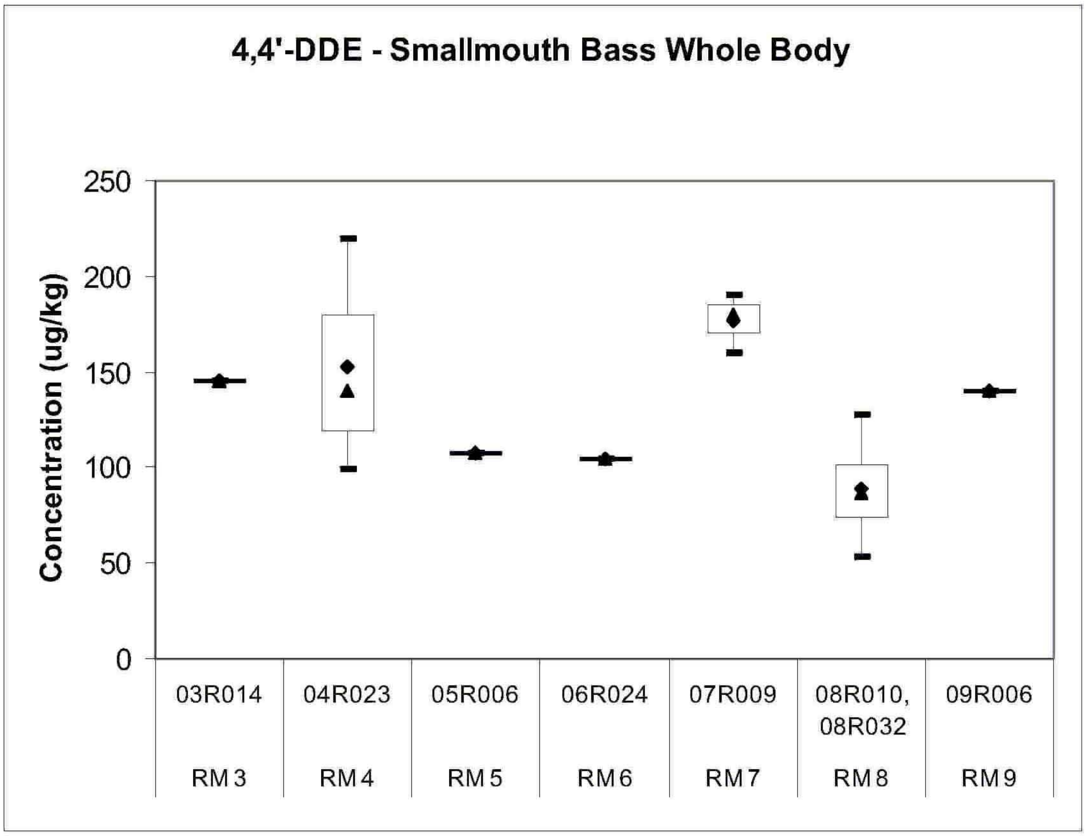

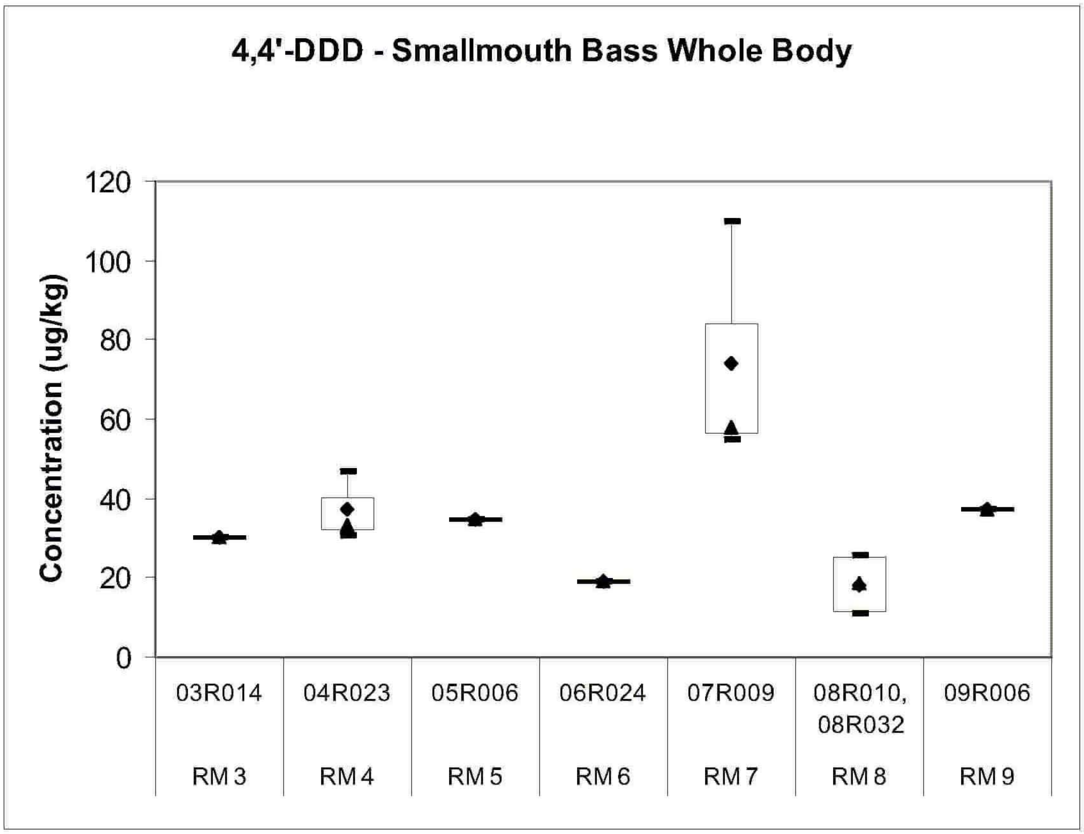

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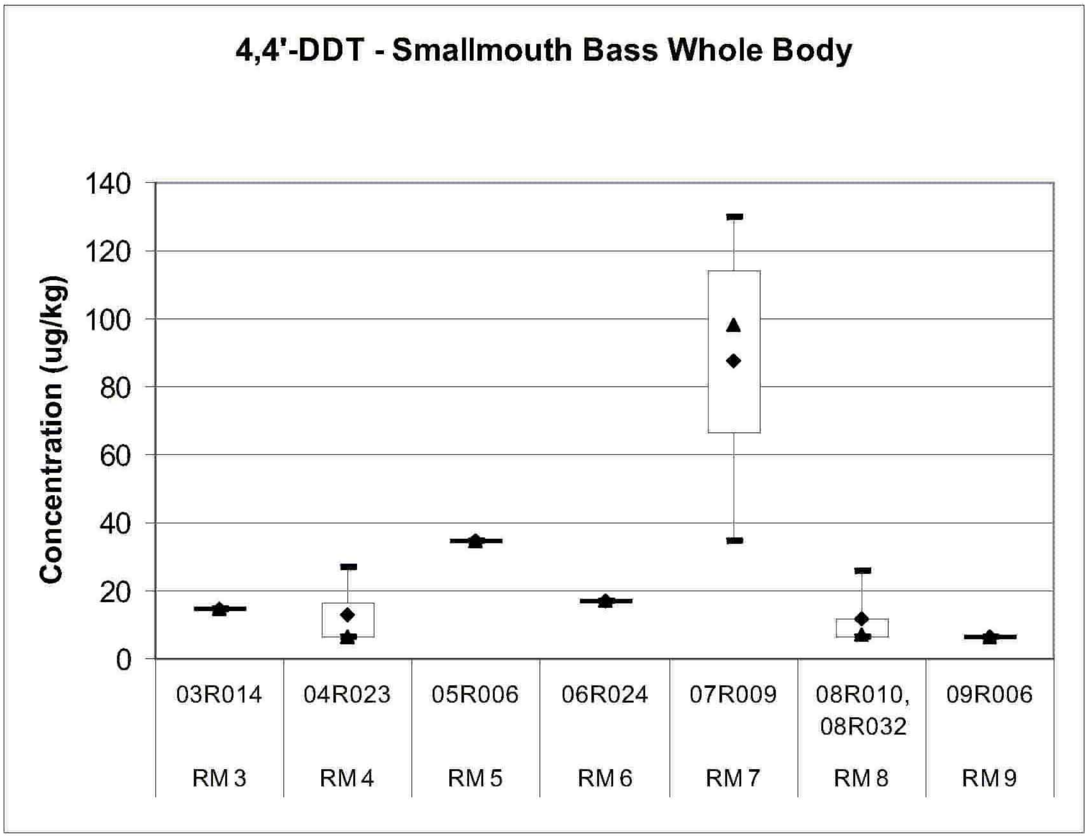

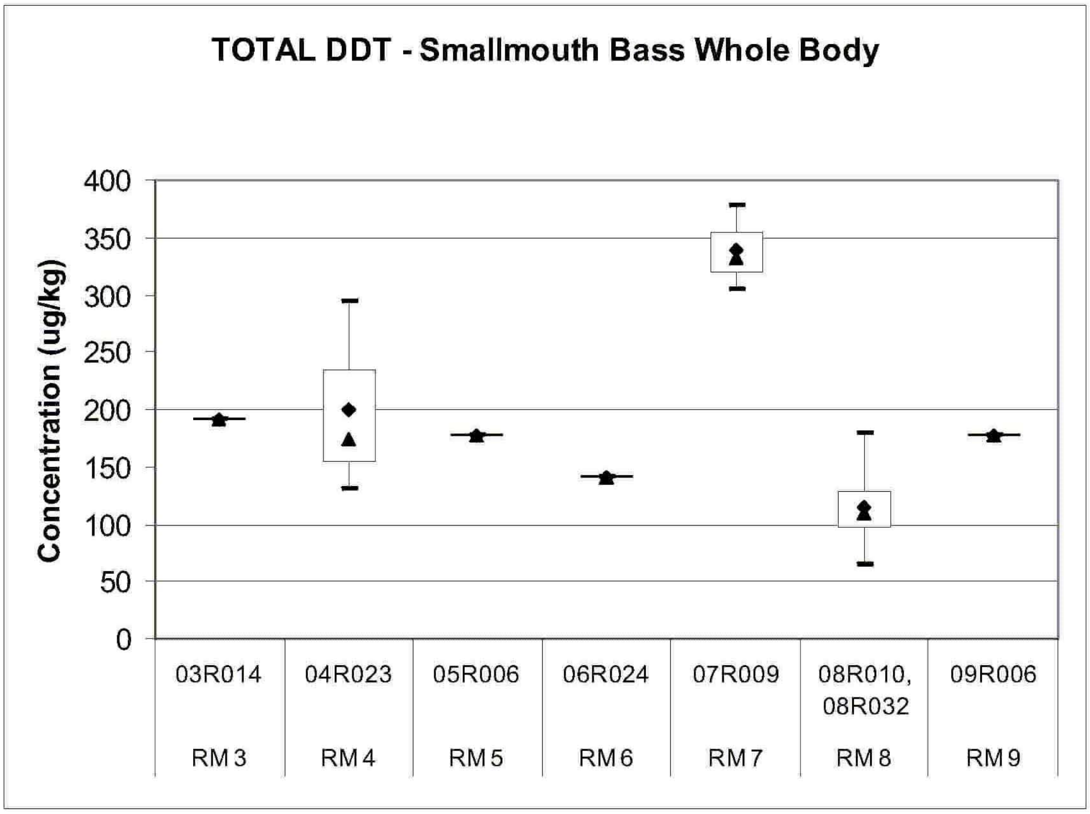

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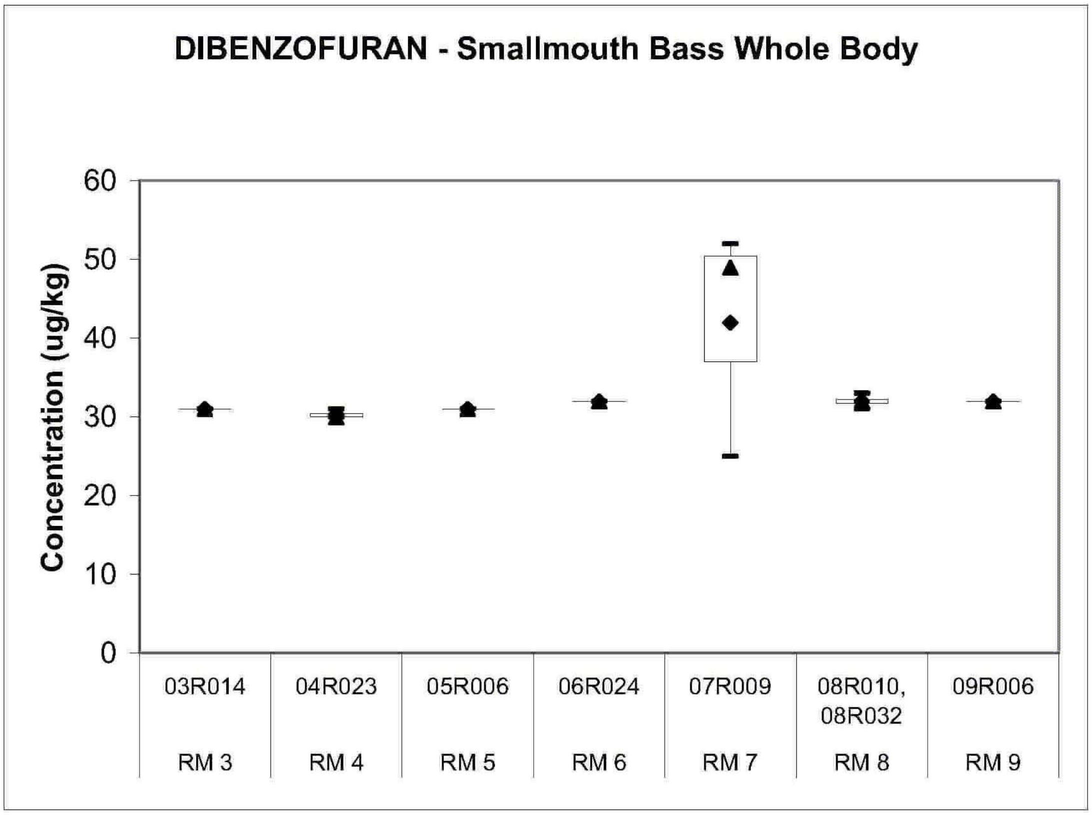

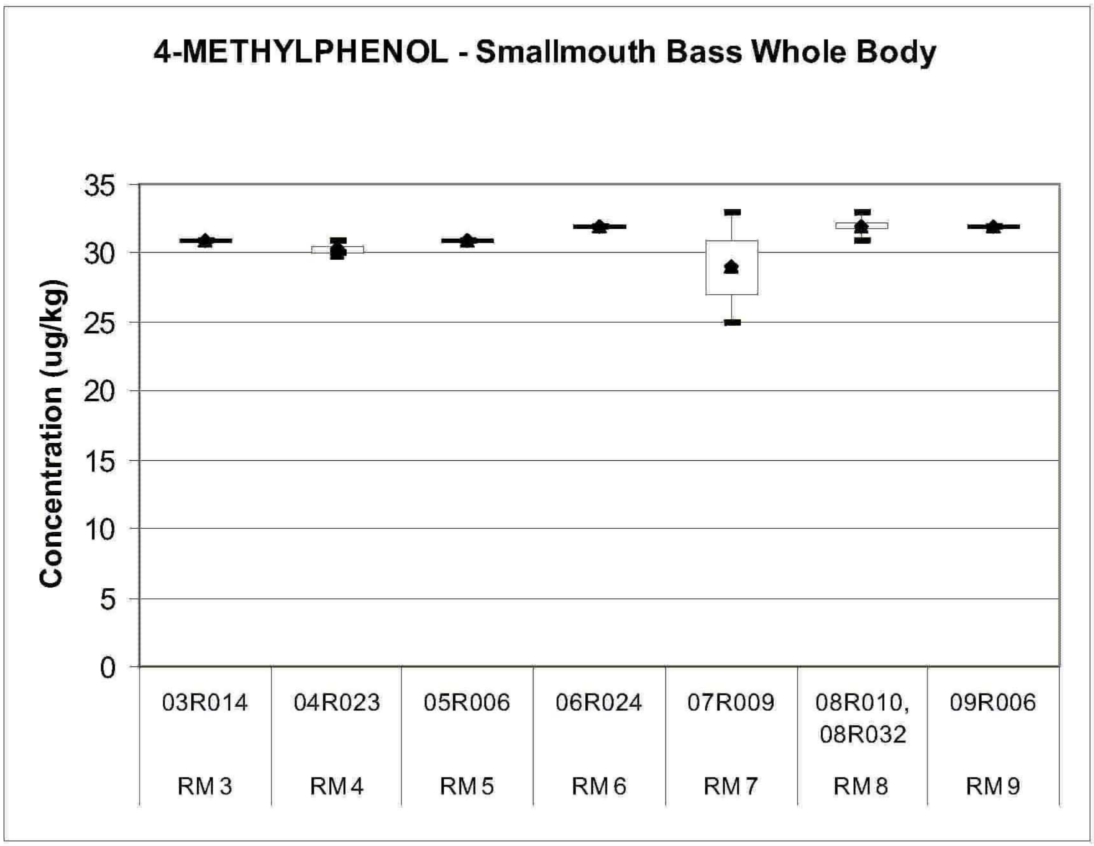

Figure 4-31. Box Plots of Smallmouth Bass Whole-body Tissue Indicator Chemical Concentrations. When a chemical was not detected, the detection limit was used.

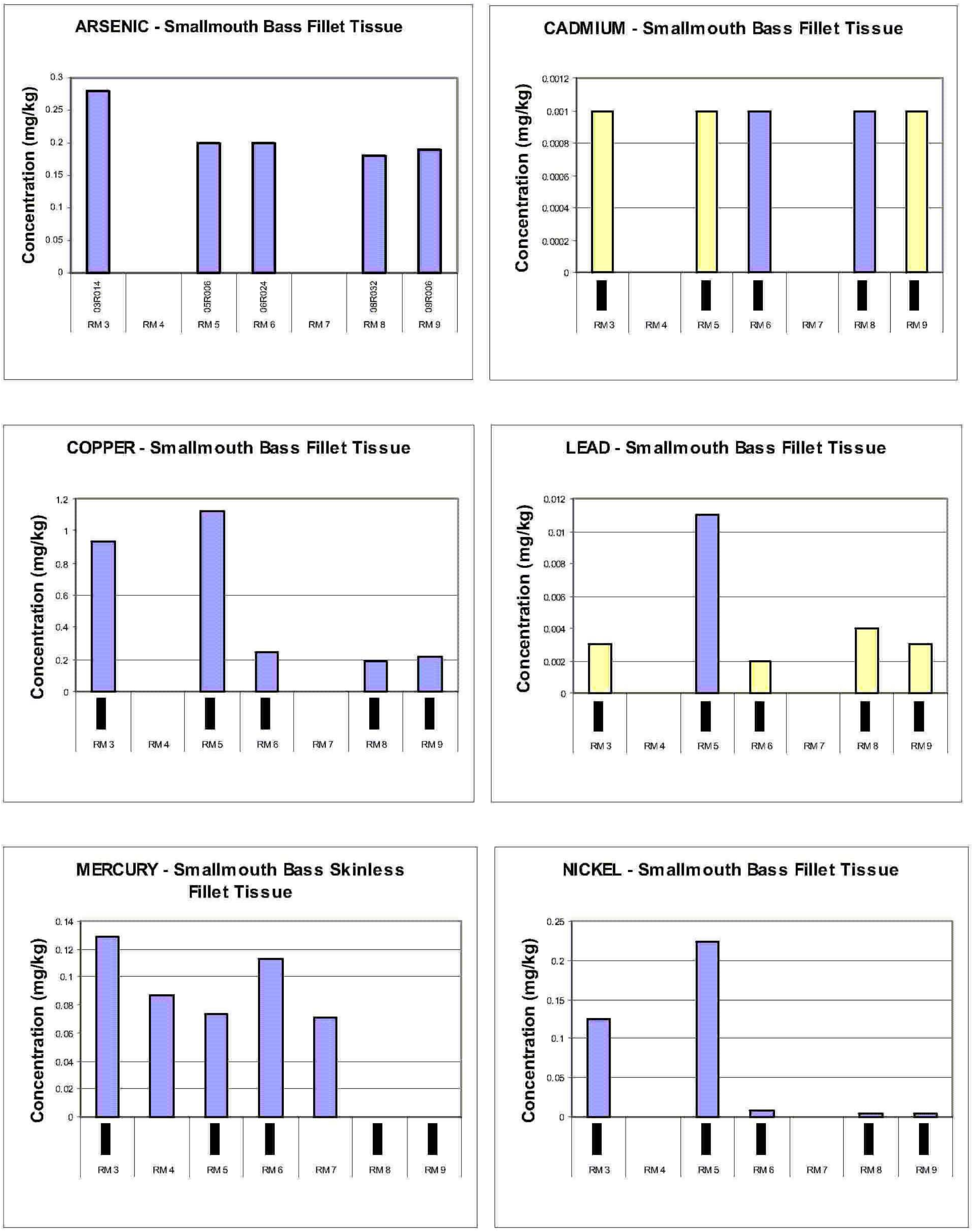

Figure 4-32. Smallmouth Bass Fillet Tissue Concentrations for Indicator Chemicals Analyzed. When a chemical was not detected, the detection limit was used (highlighted in yellow).

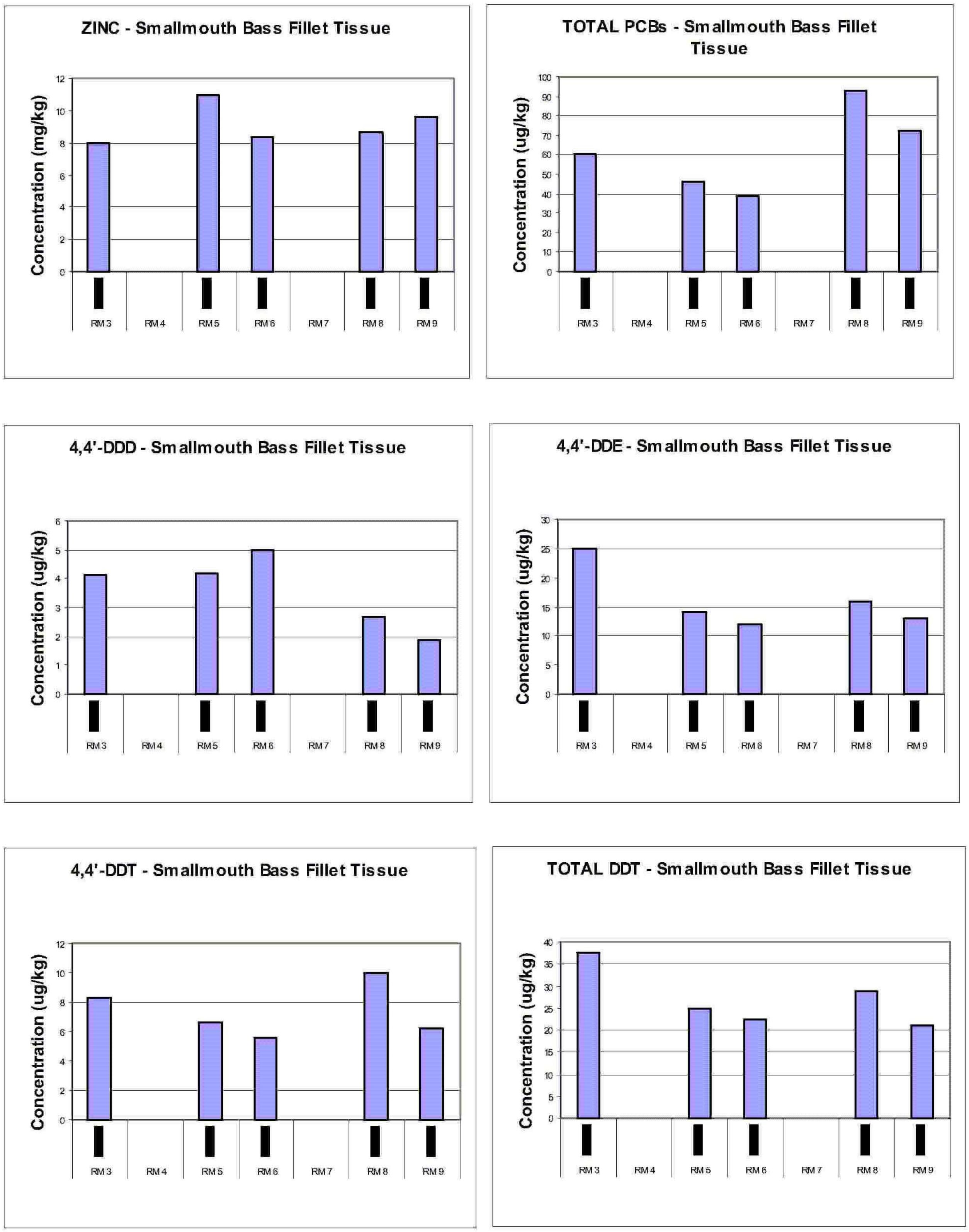

Figure 4-32. Smallmouth Bass Fillet Tissue Concentrations for Indicator Chemicals Analyzed. When a chemical was not detected, the detection limit was used (highlighted in yellow).

LWG
LOWER WILLAMETTE GROUP

Portland Harbor RI/FS
Round 1 Site Characterization Summary Report

APPENDIX A

TECHNICAL MEMORANDUM
GUIDELINES FOR DATA REPORTING, DATA AVERAGING, AND TREATMENT OF NON-DETECTED VALUES FOR THE ROUND 1 DATABASE

October 12, 2004

DRAFT DOCUMENT: DO NOT QUOTE OR CITE
This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

Prepared for:
The Lower Willamette Group

Prepared by:
Integral Consulting, Inc.

LOWER WILLAMETTE GROUP

PORTLAND HARBOR RI/FS

TECHNICAL MEMORANDUM

GUIDELINES FOR DATA REPORTING, DATA AVERAGING, AND TREATMENT OF NON-DETECTED VALUES FOR THE ROUND 1 DATABASE

June 10, 2004

Prepared for:
The Lower Willamette Group

Prepared by:
Kennedy/Jenks Consultants
Integral Consulting, Inc.
Windward Environmental, L.L.C.

1.0 Introduction

This technical memorandum presents the rules to be followed for development of the Round 1 Site Characterization and Risk Assessment (SCRA) Database from the Round 1 Main Database. The Round 1 Main Database will include all data submitted by the analytical laboratories for analyses conducted on samples collected during the Round 1 field sampling program. The Round 1 Main Database will be maintained so that a data user may examine all the data as reported by the laboratories. Modifications will be made to the Main Database by Integral Consulting, Inc. (Integral) to develop the Round 1 SCRA Database to address the following data issues:

1. Reporting of multiple results for the same constituent in the same sample
2. Reduction of field and laboratory replicates, duplicates, and splits of samples to derive one value for use.

Development of the Round 1 SCRA Database will provide consistency among users of the data for site characterization, ecological risk assessment, and human health risk assessment. Subsequent data reduction conducted by data users (e.g. exposure point concentrations, organic carbon normalized concentrations) will be documented in the associated report or technical memorandum. Rules to be applied in development of the Round 1 SCRA Database are described in the following sections.

2.0 Criteria for Selection of a Value from Multiple Results for the Same Chemical in a Sample

There are several scenarios for sediment and tissue analysis that resulted in the reporting of results for a specific parameter by more than one method:

- A subset of semivolatile organic compound (SVOC) (sediment and tissue) and volatile organic compound (VOC) (sediment) analytes was analyzed by full-scan (EPA Methods 8270 and 8260) and by selected ion monitoring (SIM).
- Selected analytes (hexachlorobutadiene, hexachlorobenzene, hexachloroethane, pentachlorophenol, naphthalene, 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, 1,4-dichlorobenzene, aluminum, manganese) were reported by the laboratories by more than one method, as required in the Round 1 quality assurance project plan (QAPP).
- Chlorinated pesticide reanalysis was performed for selected samples.

The following scheme will be used to select the results for parameters being reported by more than one method.

- For VOC and SVOC full-scan and SIM analyses, the highest detected value will be selected for detected results. If results are reported as undetected by both methods, the undetected result with the lowest reporting detection limit (RDL) will be selected for reporting. The SIM analytical technique is more sensitive, and the undetected results were reported at a lower RDL by SIM than by the full-scan method. If one result is detected and one result is undetected, the detected result will be selected for reporting.
- The highest detected naphthalene, 1,2,4-trichlorobenzene, 1,2-dichlorobenzene, 1,3-dichlorobenzene, and 1,4-dichlorobenzene results by EPA Methods 8260B or 8270C will be selected for detected results. If results are reported as undetected by both methods, the 8260B results will be reported because the laboratory RDLs for analysis of these parameters by 8260B are significantly lower than the RDLs for 8270C.
- Hexachlorobutadiene, hexachloroethane, and hexachlorobenzene results were reported by EPA Method 8081A, EPA Method 8270C full-scan, EPA Method 8270C SIM and EPA Method 8270C-ion trap (selected samples). EPA Method 8081A results will be selected for undetected results or results that are not qualified as tentatively identified (NJ qualifier). Method 8081A will be considered the primary analysis because the laboratory RDLs for analysis of these parameters by 8081A are significantly lower than the RDLs for analysis of these parameters by 8270C. However, if the 8081A result for these parameters was qualified as tentatively identified (N or NJ qualifier), the undetected result with the lowest RDL (GC/MS SIM or GC/MS ion trap) will be selected for reporting.
- Pentachlorophenol was analyzed by three methods for sediment: 8151, 8270C full-scan, and 8270C SIM. However, the laboratory encountered problems with low matrix spike recoveries for pentachlorophenol by EPA Method 8151. Therefore, results by EPA Method 8151 were not included in the evaluation of results selected for reporting for pentachlorophenol. The highest detected result from the 8270C full-scan and 8270C SIM analyses will be reported for detected results. If results are reported as undetected by both methods, the undetected result with the lowest RDL will be selected for reporting. If one result is detected and one result undetected, the detected result will be selected for reporting. For tissue samples, pentachlorophenol was reported by two methods: 8270C and 8270C SIM. The SIM result is preferred because the reporting limit for the SIM analysis is typically an order of magnitude lower than the reporting limit for the analysis by 8270C full-scan.
- Aluminum and manganese in selected sediment samples were analyzed by EPA methods 6010B and 6020. The highest detected value will be selected for detected results. If results are reported as undetected by both methods, the undetected result with the lowest RDL will be selected for

reporting. If one result is detected and one result is undetected, the detected result will be selected for reporting. The remaining sediment samples were analyzed for aluminum and manganese by EPA Method 6010B.

2.1 SELECTION OF CHLORINATED PESTICIDE RESULTS

The LWG's recommendations for selection of chlorinated pesticide results were included in a May 7, 2004 Technical Memorandum (Finalization of Round 1 Chlorinated Pesticide Data). The selection of chlorinated pesticide results was resolved cooperatively with EPA and its partners. The selection criteria for reporting of chlorinated pesticide results are presented below.

Of the two methods used to analyze for pesticides, GC/ECD provides greater sensitivity and GC/MS provides greater selectivity. In order to obtain the greatest benefit from each method, data were selected for reporting based on their detection status and qualification status. A set of rules was developed to select which result to report for each sample, as described below:

1. The analyte is not detected by either method: Report the lowest reporting limit.
2. The analyte is detected by GC/ECD but undetected by GC/MS-ion trap: Evaluate the qualifiers and the magnitude of the analyte concentration (GC/ECD) with respect to the reporting limit (GC/MS-ion trap).
    a. The GC/ECD result is qualified N or NJ: Report the GC/MS-ion trap reporting limit.
    b. The GC/ECD result is higher than the GC/MS-ion trap reporting limit and is not qualified N or NJ: Report the average of the GC/ECD result and the GC/MS-ion trap reporting limit without a U (i.e., the analyte is reported as detected).
    c. The GC/ECD result is lower than the GC/MS-ion trap reporting limit and is not qualified N or NJ: Report the GC/ECD result.
3. The analyte is undetected by GC/ECD but detected by GC/MS-ion trap: Report the GC/MS-ion trap result.
4. The analyte is detected by both methods: Evaluate the qualifiers.
    a. The GC/ECD result is qualified N or NJ: Report the GC/MS-ion trap result.
    b. Either or both results are qualified J or unqualified: Report the average of the results for GC/ECD and GC/MS-ion trap; apply a J qualifier if one or both results are J-qualified.

Matrix interference that resulted in elevated reporting limits for many of the target chlorinated pesticide compounds was encountered for five of the smallmouth bass samples in the Method 8270C analysis. To resolve this interference, these five sample extracts were subjected to acid cleanup. Selected target compounds (i.e., beta-endosulfan, dieldrin, endosulfan sulfate, endrin, endrin aldehyde, endrin ketone, and methoxychlor), were not recovered after acid cleanup, as indicated by the recoveries of these compounds in the laboratory quality control samples. Results for these compounds from the extract prior to acid cleanup, with an elevated reporting limit, were evaluated against the selection criteria. The remaining target compounds were successfully recovered from the acid extract, and the results from the acid cleanup extract were evaluated against the selection criteria.

2.2 REPORTING OF PCB CONGENER COELUTIONS

Coeluting PCB congeners were reported by the analytical laboratory as individual results, where the first congener of a coelution was reported with the quantitative value and a C qualifier. The other congeners in a coelution were reported with only a C qualifier and the PCB number of the first congener to refer the data user back to that congener for the quantitative value of the coelution. For example, PCB 90, PCB 101, and PCB 113 coeluted, so if the value of that coelution was 37, then PCB 90 was reported by the laboratory as "37 C," PCB 101 was reported as "C90," and PCB 113 was reported as "C90."

In the database, the records of individual congeners in coelutions will be replaced with a single record that has a parameter name that includes the PCB numbers of each of the coeluting congeners. In the above example, the records for PCB 90, PCB 101, and PCB 113 will be replaced with a single record containing the parameter name "PCB 90,101,113" and the quantitative value "37."

3.0 DATA REDUCTION FOR DEVELOPMENT OF SCRA DATABASE

Field duplicate, triplicate, and split samples were collected for selected tissue and sediment samples during the Round 1 field investigation, as required by the QAPP. In addition, duplicates were generated by the laboratory for metals analyses and some conventional parameters, as required by the associated analytical method. Therefore, there are multiple results for selected field samples due to the collection and analysis of field and laboratory duplicates and replicates. Duplicate, triplicate, and split samples (field and laboratory) will be reported as individual results in the Round 1 Main Database. The sample type field will indicate that the result is a duplicate, triplicate, or split, and the parent sample will be identified in another field.

For data interpretation purposes, the process described in the following sections will be used to calculate a single concentration for a parameter for which field or laboratory duplicates, replicates, or splits resulted in multiple results for a specific parameter at a field location. The data reduction activities described below will occur after data validation is complete in order to incorporate data qualifiers applied during validation. The single concentration resulting from the data reduction activities will be included in the Round 1 SCRA Database.

3.1 TREATMENT OF NON-DETECTED VALUES IN AVERAGES

If a chemical is not detected in a sample, the result will be represented in the database as the RDL and a laboratory qualifier such as U, UJ, etc. in the laboratory qualifier field. A "detect flag" field will be populated with a Y for detected values and an N for non-detects. Non-detected values will be incorporated into duplicates and sums according to the rules in the following sections.

3.2 LABORATORY DUPLICATES

Laboratory duplicates for sediment and tissue samples will be averaged as described below:

- When averaging laboratory duplicates, assume that the data validation qualifiers assigned to the field sample are also assigned to the associated laboratory duplicate results and then implement the steps identified in the following bullets.
- If the sample and laboratory duplicate results are both reported as detected concentrations, the average concentration will be calculated and used in all further data reduction activities.
- If the sample and laboratory duplicate results are both reported as undetected, the lower RDL for the two undetected results will be selected and designated a non-detect for use in all further data reduction activities.
- If either the sample or laboratory duplicate result is reported as detected and the associated sample or laboratory duplicate result is reported as undetected, the detected result will be selected for reporting and will be used in all further data reduction activities.

3.3 FIELD SPLIT AND REPLICATE RESULTS FOR SEDIMENT SAMPLES

Field split samples were collected for sediment samples by collecting two aliquots of the sediment composite sample and submitting both aliquots for laboratory analysis. Field replicate samples were also collected for sediment samples by collecting three samples from the same station and submitting the three samples from the station for laboratory analysis. Field replicate results will be retained in the SCRA database as individual sample results. Field split samples will be averaged as described below:

- If the sample and field split results are all reported as detected concentrations, the average concentration will be calculated and used in all further data reduction activities.

- If the sample and field split results are all reported as undetected, the lowest RDL for the undetected results will be selected and designated a non-detect for use in all further data reduction activities.
- If the sample and field split results are mixed (i.e., one is reported as detected and one is reported as undetected), the detected result will be selected for reporting and used in all further data reduction activities.

3.4 FIELD REPLICATE RESULTS FOR TISSUE SAMPLES

Field replicate samples were generated for tissue samples by collecting additional fish in the field and generating two or three composite samples for each replicate station. The composite samples were generated by homogenizing up to five individual fish (or about 350 grams for crayfish and sculpin samples) for each composite sample. Because the field replicate samples for tissue were generated by compositing separate individual fish, the fish field replicate samples will be treated as separate samples.

3.5 HIERARCHY FOR CALCULATION OF AVERAGE CONCENTRATIONS

Selected sediment samples have associated laboratory duplicate, field split, and field replicate results. In these cases, the average concentrations will be calculated in the following order:

- Laboratory duplicates will be evaluated first, and the resulting average or selected value will be used in the following step.
- Field splits will be evaluated next and the resulting average or selected value will be used in the following step.
- Field replicates will be retained in the SCRA database as individual sample results. However, subsequent data evaluation may result in averaging of the field replicate results.

3.6 PROPAGATION OF QUALIFIERS IN CALCULATED AVERAGES

In cases where multiple results are generated due to analysis of duplicates, and splits, and average concentrations are derived as described above, it is necessary to define how the data validation qualifiers will be assigned to the calculated average concentrations. Data validation qualifiers will be propagated as follows:

- If all results included in the calculated average are qualified with the same qualifier (e.g., U or J), then this qualifier will be applied to the calculated average.
- If one or more of the results are qualified as undetected and one or more of the other results included in the average are detected and qualified as estimated, the calculated average will be qualified as estimated.

- If all of the included results are detected and one or more of the results is qualified as estimated, the calculated average will be qualified as estimated.
- As noted above, a "detect flag" field will be populated with a Y for detected values and an N for non-detects for all samples and calculated averages in both the Round 1 Main Database and the Round 1 SCRA Database.
- A T qualifier will be added to all results in the SCRA database that are mathematically derived (e.g., from calculating the average of multiple results) and all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 1 data.

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Portland Harbor RI/FS
Round 1 Site Characterization Summary Report

APPENDIX C

INTERIM DELIVERABLE FOR HUMAN HEALTH RISK ASSESSMENT: ROUND 1 TISSUE EXPOSURE POINT CONCENTRATIONS

October 12, 2004

DRAFT DOCUMENT: DO NOT QUOTE OR CITE
This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

Prepared for:
The Lower Willamette Group

Prepared by:
Integral Consulting, Inc.

LWG
LOWER WILLAMETTE GROUP

PORTLAND HARBOR RI/FS

INTERIM DELIVERABLE FOR HUMAN HEALTH RISK ASSESSMENT:

ROUND 1 TISSUE EXPOSURE POINT CONCENTRATIONS

FINAL

October 8, 2004

Prepared for:
The Lower Willamette Group

Prepared by:
Kennedy/Jenks Consultants

1.0 Introduction

Exposure point concentrations (EPCs) are used in risk assessment to quantify chemical intakes. The EPC represents the chemical concentration in a given medium that is contacted over the duration of the exposure. This interim deliverable presents the Round 1 tissue EPCs for use in the Baseline Human Health Risk Assessment (HHRA) for the Portland Harbor Superfund Site (Site) and the process used to derive the EPCs. The EPCs presented in this interim deliverable and the process used to derive them are specifically for the HHRA and may not be applicable to other elements of the Portland Harbor Remedial Investigation and Feasibility Study.

The general process to derive EPCs for the HHRA was previously described in the *Programmatic Work Plan, Appendix C: Human Health Risk Assessment Approach* (Integral Consulting, Inc., et al. 2004), which was approved by EPA on 29 June 2004. Additional details on deriving the Round 1 tissue EPCs were developed through discussions with EPA and its partners and were finalized during the 3 June 2004 meeting between the LWG and EPA and its partners. This interim deliverable describes the agreed to process for deriving the Round 1 tissue EPCs.

The EPCs presented in this interim deliverable are based only on the Round 1 tissue data. No historical tissue data are of sufficient quality to include in the EPCs. Sturgeon, adult spring Chinook, and adult Pacific lamprey were collected in the summer of 2003 through a cooperative effort of the Oregon Department of Human Services (ODHS), Agency for Toxic Substances and Disease Registry (ATSDR), Oregon Department of Fish and Wildlife (ODFW), the City of Portland and EPA Region 10. These data were not available at the time of this interim deliverable, so were not included in the EPCs. If these data become available or other tissue data are collected to support the HHRA, the tissue EPCs will be revised, as appropriate, prior to the Baseline HHRA.

2.0 Round 1 Tissue Data

Smallmouth bass, black crappie, common carp, brown bullhead, and crayfish were the resident fish and shellfish species collected and analyzed during Round 1 to support the HHRA. The sampling design was based on the possible home ranges of the target fish and shellfish, so the sampling approach differed based on the species. The composite scheme for each sample was reviewed and approved by EPA in November and December 2002 prior to laboratory analysis.

For crayfish, samples were collected from 24 stations, which were selected based on habitat areas. Crayfish were collected and composited for individual habitat areas due to their limited home ranges. Only whole body composite samples were collected for crayfish. Two replicate composite samples were collected at three of the

24 stations. At each of the remaining stations, a single composite sample was collected.

For smallmouth bass, samples were collected from eight locations, each corresponding to approximately one river mile. Smallmouth bass were collected and composited based on river mile locations due to their small home range relative to the other fish collected during Round 1. Three whole body replicate composite samples were collected at three of the eight river mile locations. At each of the remaining five river mile locations, one whole body composite sample and one fillet composite sample was collected.

For black crappie, carp, and brown bullhead, samples were collected and composited for two fishing zones, each approximately three river miles in length. Three whole body and three fillet replicate composite samples were collected at each of the two fishing zones for carp and brown bullhead. Two whole body and two fillet replicate composite samples were collected within each of the fishing zones for black crappie.

The Round 1 tissue EPCs for the HHRA were derived both for individual sampling locations and for the entire Site for crayfish, smallmouth bass, black crappie, carp, and brown bullhead. EPCs for fish were calculated for both fillet and whole body samples. EPCs were derived for the chemicals detected in the Round 1 fish and shellfish tissue samples.

3.0 Round 1 SCRA Database

All data submitted by the analytical laboratories for analyses conducted on samples collected during Round 1 were entered into the Round 1 Main Database. The Round 1 Site Characterization and Risk Assessment (SCRA) Database was developed from the Round 1 Main Database to address reporting of multiple results for the same constituent in the same sample and to reduce laboratory duplicates and field splits of samples to derive one value for use. The rationale for developing the Round 1 SCRA Database and rules for data reductions are described in the *Guidelines for Data Reporting, Data Averaging, and Treatment of Non-Detected Values for the Round 1 Database Technical Memorandum* (Kennedy/Jenks Consultants, et al. 2004). The Round 1 tissue EPCs were calculated using the Round 1 SCRA Database.

4.0 Treatment of Non-Detects in Exposure Point Concentrations

Chemicals that were not detected at concentrations above the detection limit were designated as non-detects. Non-detects may represent concentrations that are zero or may represent concentrations greater than zero, but less than the detection limit. For purposes of calculating EPCs, proxy values were assigned to non-detects in accordance with the following rules, which were previously presented in Appendix C of the Programmatic Work Plan:

1. If a chemical was not detected in any sample for a given species and sample type (i.e., fillet or whole body), it was assumed to not be present, so an EPC was not calculated.

2. If a chemical is detected at least once in samples for a given species and sample type, a concentration equal to one-half the detection limit was used as a proxy for non-detects in calculating the EPC.

The above rules were applied based on the home range of the species evaluated and the dataset that was used to calculate EPCs. Different datasets were used to calculate EPCs for individual sampling locations and for the entire Site. Individual sampling locations are sample stations for crayfish, river miles for smallmouth bass, and fishing zones for black crappie, carp, and brown bullhead. In order to assess whether a chemical was detected for a given dataset, data were pooled for a given species and sample type both for individual sampling locations and for the entire Site.

For individual sampling location EPCs, only data collected at an individual location were evaluated in determining whether a chemical was detected at that location. If a chemical was detected in a sample at a given sampling location, one-half the detection limit was used at the location for replicate samples where the chemical was not detected in calculating the individual location EPC. At other locations where the chemical was not detected in any sample, the chemical was assumed not to be present, so an EPC was not calculated for the chemical at those locations.

For site-wide EPCs, data were pooled for the entire Site and detections were evaluated based on the home range of the given species. For species with limited home ranges (i.e., crayfish and smallmouth bass), a detection at one station or river mile does not indicate that the chemical is reasonably likely to be present at another station or river mile. Therefore, if a chemical was not detected at a given sampling location for crayfish or smallmouth bass, the chemical was assumed not to be present at that location and zero was used for that location in calculating the site-wide EPC. For species with broader home ranges (i.e., carp, brown bullhead, and black crappie), it was assumed that a chemical could be present at all locations, if it was detected within the Site. If a chemical was detected in at least one sample within the Site for a given species and sample type, one-half the detection limit was used for all non-detects in calculating the site-wide EPC for that chemical in carp, brown bullhead, or black crappie.

5.0 Summed Concentrations

Some toxicity values are based on exposure to chemical mixtures that are congeners, isomers, or closely related degradation products of a parent compound and not to individual chemicals. As a result, risks will be evaluated in the HHRA for the combined exposure to the chemicals and not on an individual chemical basis. The concentrations of the individual isomers or congeners that comprise the mixtures were summed to calculate the EPCs for the mixtures. EPCs were derived only for the summed concentrations and not for the individual chemicals that comprise the mixtures.

In calculating EPCs for mixtures, the summed concentration was calculated first on an individual sample basis. The EPCs were then derived using the summed concentrations.

The following rules were used to calculate the summed concentrations for a sample:

- If an individual chemical was detected in the sample, the detected concentration was used for that chemical in the sum.
- If an individual chemical was not detected in the sample but was determined to potentially be present using the rules for non-detects, one-half the detection limit was used for that chemical in the sum.
- If an individual chemical was not detected in the sample and was determined not to be present using the rules for non-detects, zero was used for that chemical in the sum.

Summed concentrations were calculated for the following chemicals:

- Total dichlorodiphenyldichloroethane (DDD). Total DDD was calculated by summing 2,4'-DDD and 4,4'-DDD.
- Total dichlorodiphenyldichloroethylene (DDE). Total DDE was calculated by summing 2,4'-DDE and 4,4'-DDE.
- Total dichlorodiphenyltrichloroethane (DDT). Total DDT was calculated by summing 2,4'-DDT and 4,4'-DDT.
- Total chlordane. Total chlordane was calculated by summing alpha-chlordane, trans-chlordane, cis-nonachlor, trans-nonachlor, and oxychlordane.
- Total endosulfan. Total endosulfan was calculated by summing alpha-endosulfan, beta-endosulfan and endosulfan sulfate.
- Total polychlorinated biphenyls (PCBs). Total PCBs were calculated for both Aroclors and congeners by summing the individual Aroclors or congeners.
- Total coplanar PCBs. Total coplanar PCBs were calculated by summing the individual coplanar congener concentrations for those congeners that have toxic equivalent factors (TEFs) relating toxicity to 2,3,7,8-tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD).

- Adjusted total PCBs. Adjusted total PCBs were calculated by subtracting the total coplanar PCB concentration from the total PCB congener concentration.

- Total dioxin toxic equivalent (TEQ). Total dioxin TEQ was calculated by multiplying dioxin and furan congeners by their TEFs and summing the resulting concentrations. The World Health Organization (WHO) TEFs, which are shown in Table 1, were used to calculate the total dioxin TEQ.

- Total PCB TEQ. Total PCB TEQ was calculated by multiplying coplanar PCB congeners by their TEFs and summing the resulting concentrations. The WHO TEFs, which are shown in Table 1, were used to calculate the total PCB TEQ.

- Total TEQ. The total TEQ was calculated by summing the total dioxin TEQ and the total PCB TEQ.

After summing the concentrations on an individual sample basis, EPCs for the above summed concentrations were derived using the same process that was used for other chemicals, as described below.

6.0 Derivation of Exposure Point Concentrations

EPCs for tissue were derived both for individual sampling locations and for the entire Site. Due to the different sampling approaches, EPCs were derived by station for crayfish, by river mile for smallmouth bass, and by fishing zone for carp, black crappie, and brown bullhead. Site-wide EPCs were also calculated for each species.

Arithmetic mean and maximum concentrations were both identified as EPCs to address potential variation in tissue concentrations, if multiple results were available. In addition, where data for at least five samples were available, the 95 percent upper confidence limit (UCL) on the mean concentrations were calculated for use as EPCs.

Arsenic concentrations reported for Round 1 tissue samples represent total arsenic concentrations; however, risks from exposure to inorganic arsenic will be evaluated in the HHRA. In tissue, inorganic arsenic only represents a fraction of the total arsenic. An assumption that 10 percent of total arsenic is inorganic arsenic was used to estimate the inorganic arsenic EPCs. As described in Appendix C of the Programmatic Work Plan, the assumption of 10 percent inorganic arsenic is expected to provide a health protective estimate. The total arsenic EPCs were multiplied by a factor of 0.1 (i.e., 10 percent) to calculate the inorganic arsenic EPCs.

6.1 STATION EXPOSURE POINT CONCENTRATIONS

EPCs were derived for crayfish for each sample station. The station EPCs for crayfish are presented in Table 2.

Three of the 24 crayfish sample stations had two replicate results. At those stations, the arithmetic mean concentrations for the two replicate results were calculated using the rules for non-detects. The arithmetic mean and maximum concentrations for the two replicate results were identified as the EPCs for that station. If a chemical was not detected in either sample at a station, EPCs were not identified for that chemical at that station.

At the remaining sample stations, a single composite sample was collected, in accordance with the sampling design. The results for that sample were identified as the EPCs for that station. If a chemical was not detected at a station, an EPC was not identified for that chemical at that station.

6.2 RIVER MILE EXPOSURE POINT CONCENTRATIONS

EPCs were derived for smallmouth bass for each river mile. The river mile EPCs for smallmouth bass are presented in Table 3.

Three of the eight river miles had three replicate results for whole body samples. At those river miles, the arithmetic mean concentrations for the three replicate results were calculated using the rules for non-detects. The arithmetic mean and maximum concentrations for the three replicate results were identified as the EPCs for that river mile. If a chemical was not detected in any replicate sample collected in an individual river mile, EPCs were not identified for that chemical at that river mile.

At the remaining river miles, a single composite whole body sample and a single composite fillet sample were collected, in accordance with the sampling design. The results for either the whole body or fillet sample were identified as the whole body or fillet EPCs for that river mile. If a chemical was not detected in a river mile for a given sample type (i.e., whole body or fillet), an EPC was not identified for that chemical at that river mile for that sample type.

6.3 FISHING ZONE EXPOSURE POINT CONCENTRATIONS

EPCs were derived for carp, brown bullhead, and black crappie for each fishing zone. The fishing zone EPCs for carp, brown bullhead, and black crappie are presented in Tables 4, 5, and 6, respectively.

For carp and brown bullhead, three replicate whole body composite samples and three replicate fillet composite samples were collected at each of the two fishing zones. For black crappie, two replicate whole body samples and two replicate fillet samples were collected at each of the fishing zones. The arithmetic mean concentrations for the replicate results were calculated using the rules for non-detects. The arithmetic mean and maximum concentrations for the replicate results were identified as the EPCs for either whole body or fillet samples for that fishing zone. If a chemical was not detected in any sample in a fishing zone for a given sample type, EPCs were not identified for that chemical in that fishing zone for that sample type.

6.4 SITE-WIDE EXPOSURE POINT CONCENTRATIONS

Site-wide EPCs were derived for crayfish, smallmouth bass, carp, brown bullhead, and black crappie and are presented in Tables 7, 8, 9, 10, and 11, respectively. Due to differences in home ranges, site-wide EPCs were derived differently for crayfish and smallmouth bass than for carp, brown bullhead, and black crappie.

6.4.1 Crayfish and Smallmouth Bass

Because crayfish and smallmouth bass have limited home ranges, the results for each station or river mile were considered representative of only that station or river mile. In calculating the site-wide EPCs for these species, the EPCs were first derived for the individual stations or river miles. The individual EPCs were then combined to derive the site-wide EPCs.

The arithmetic mean concentrations were calculated for the stations or river miles with replicate results, as described above. The results from the stations or river miles with only one sample were then pooled with the arithmetic mean concentrations from the stations or river miles with replicate samples to calculate the arithmetic mean for the entire Site. If a chemical was not detected in a given station or river mile, zero was used for that location in calculating the site-wide average. If a chemical was not detected at any station or river mile within the Site for a given species and sample type, an EPC was not derived for that chemical in that species and sample type.

Maximum concentrations for each station or river mile were pooled into one dataset. The maximum concentration from that dataset was then identified as the maximum concentration for the entire Site. The arithmetic mean and maximum concentrations for the entire Site were identified as site-wide EPCs.

Because site-wide data were available for at least five crayfish, whole body smallmouth bass, and fillet smallmouth bass samples, 95% UCLs were calculated for each dataset following EPA guidance (EPA 2002). ProUCL version 3.0 (EPA 2004) was used to test each dataset for normal, lognormal, or gamma distributions and to calculate the 95% UCLs. Data were tested first for normality, then for gamma distributions, and finally for lognormal distributions, as recommended by ProUCL guidance (EPA 2004). The 95% UCLs were calculated using the method recommended by ProUCL guidance (EPA 2004) for the data distribution, sample size, and skewness. The method used to calculate the 95% UCL and the data distribution is indicated in the EPC tables.

6.4.2 Carp, Brown Bullhead, and Black Crappie

Carp, brown bullhead, and black crappie have home ranges that could potentially span the entire Site. As a result, data collected in either fishing zone were considered representative of the entire Site. In calculating the site-wide EPCs for these species, the data for the entire Site were pooled as a single dataset.

The arithmetic mean concentrations were calculated using the results for each individual sample collected within the Site for a given species and sample type. If a chemical was detected at least once within the Site for a given species and sample type, one-half the detection limit was used for all non-detects for that species and sample type in calculating the site-wide average for that chemical. If a chemical was not detected in any sample within the Site for a given species and sample type, an EPC was not derived for that chemical.

The maximum concentration for the individual sample results collected within the Site for a given species and sample type was identified as the maximum concentration for the entire Site. The arithmetic mean and maximum concentrations for the entire Site were identified as site-wide EPCs.

Site-wide data were available for at least five whole body carp, fillet carp, whole body brown bullhead, and fillet brown bullhead samples, so 95% UCLs were calculated for each dataset following EPA guidance (EPA 2002). Because data for at least five samples were not available for either whole body or fillet tissue, 95% UCLs were not calculated for black crappie. ProUCL version 3.0 (EPA 2004) was used to test the carp and brown bullhead datasets for normal, lognormal, or gamma distributions and to calculate the 95% UCLs. Data were tested first for normality, then for gamma distributions, and finally for lognormal distributions, as recommended in the ProUCL guidance (EPA 2004). The 95% UCLs were calculated using the method recommended in the ProUCL guidance (EPA 2004) for the data distribution, sample size, and skewness. The method used to calculate the 95% UCL and the data distribution are indicated in the EPC tables.

7.0 Summary

The Round 1 tissue EPCs proposed for use in the Baseline HHRA are presented in Tables 2 through 11. These EPCs were derived for target fish and shellfish species that will be evaluated in the HHRA for risk from fish consumption. EPCs were derived both for individual sampling locations and the entire Site. If additional tissue data are collected to support the HHRA prior to the Baseline HHRA, these EPCs will be revised, as appropriate.

8.0 References

EPA. 2002. Calculating Upper Confidence Limits for Exposure Point Concentrations at Hazardous Waste Sites. Office of Emergency and Remedial Response. OSWER 9285.6-10. December 2002.

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Table 1: Toxic Equivalency Factors

Chemical Class	Compound	TEF(1)
Dioxins	2,3,7,8-TCDD	1
	1,2,3,7,8-PeCDD	1
	1,2,3,4,7,8-HxCDD	0.1
	1,2,3,7,8,9-HxCDD	0.1
	1,2,3,6,7,8-HxCDD	0.1
	1,2,3,4,6,7,8-HpCDD	0.01
	OCDD	0.0001
Furans	2,3,7,8-TCDF	0.1
	1,2,3,7,8-PeCDF	0.05
	2,3,4,7,8-PeCDF	0.5
	1,2,3,4,7,8-HxCDF	0.1
	1,2,3,7,8,9-HxCDF	0.1
	1,2,3,6,7,8-HxCDF	0.1
	2,3,4,6,7,8-HxCDF	0.1
	1,2,3,4,6,7,8-HpCDF	0.01
	1,2,3,4,7,8,9-HpCDF	0.01
	OCDF	0.0001
Coplanar PCBs	3,3',4,4'-TCB (77)	0.0001
	3,4,4',5-TCB (81)	0.0001
	2,3,3',4,4'-PeCB (105)	0.0001
	2,3,4,4',5-PeCB (114)	0.0005
	2,3',4,4',5-PeCB (118)	0.0001
	2',3,4,4',5-PeCB (123)	0.0001
	3,3',4,4',5-PeCB (126)	0.1
	2,3,3',4,4',5'-HxCB (156)	0.0005
	2,3,3',4,4',5-HxCB (157)	0.0005
	2,3',4,4',5,5'-HxCB (167)	0.00001
	3,3',4,4',5,5'-HxCB (169)	0.01
	2,3,3',4,4',5,5'-HpCB (189)	0.0001
	2,2',3,3',4,4',5-HpCB (170)	--
	2,2',3,4,4',5,5'-HpCB (180)	--

(1) World Health Organization 1997 TEF.

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Table 2: Station Exposure Point Concentrations for Crayfish

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
River Mile: 2, Station: 1, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	101	101
Metal	Antimony	mg/kg	0	1	0.007	0.007
Metal	Arsenic, total	mg/kg	0	1	0.37	0.37
Metal	Arsenic, inorganic	mg/kg	0	1	0.037	0.037
Metal	Cadmium	mg/kg	0	1	0.028	0.028
Metal	Chromium	mg/kg	0	1	0.9	0.9
Metal	Copper	mg/kg	0	1	12.5	12.5
Metal	Lead	mg/kg	0	1	0.059	0.059
Metal	Manganese	mg/kg	0	1	154	154
Metal	Mercury	mg/kg	0	1	0.024	0.024
Metal	Nickel	mg/kg	0	1	0.54	0.54
Metal	Silver	mg/kg	0	1	0.027	0.027
Metal	Thallium	mg/kg	0	1	0.008	0.008
Metal	Zinc	mg/kg	0	1	16.6	16.6
PCB Aroclor	Total Aroclors	ug/kg			21	21
PCB Congener	Total Congeners	ug/kg			60.7	60.7
PCB Congener	Total Dioxin-like Congeners	ug/kg			15.1	15.1
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			45.7	45.7
Total Dioxin TEQ		ng/kg			0.455	0.455
Total PCB TEQ		ng/kg			4.55	4.55
Total TEQ		ng/kg			5.01	5.01
DDE	Total DDE	ug/kg			2.9	2.9
DDT	Total DDT	ug/kg			7.6	7.6
Chlordanes	Total Chlordane	ug/kg			1.1	1.1
River Mile: 2, Station: 15, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	89.7	89.7
Metal	Antimony	mg/kg	0	1	0.009	0.009
Metal	Arsenic, total	mg/kg	0	1	0.4	0.4
Metal	Arsenic, inorganic	mg/kg	0	1	0.04	0.04
Metal	Cadmium	mg/kg	0	1	0.017	0.017
Metal	Chromium	mg/kg	0	1	0.7	0.7
Metal	Copper	mg/kg	0	1	11.2	11.2
Metal	Lead	mg/kg	0	1	0.078	0.078
Metal	Manganese	mg/kg	0	1	183	183
Metal	Mercury	mg/kg	0	1	0.023	0.023
Metal	Nickel	mg/kg	0	1	0.47	0.47
Metal	Silver	mg/kg	0	1	0.026	0.026
Metal	Thallium	mg/kg	0	1	0.007	0.007
Metal	Zinc	mg/kg	0	1	15.9	15.9
Pesticide	Endrin	ug/kg	0	1	1.8	1.8
PCB Aroclor	Total Aroclors	ug/kg			28	28
DDE	Total DDE	ug/kg			4.1	4.1
DDT	Total DDT	ug/kg			9.5	9.5
Chlordanes	Total Chlordane	ug/kg			1.3	1.3
River Mile: 3, Station: 1, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	102	102
Metal	Antimony	mg/kg	0	1	0.007	0.007
Metal	Arsenic, total	mg/kg	0	1	0.35	0.35
Metal	Arsenic, inorganic	mg/kg	0	1	0.035	0.035
Metal	Cadmium	mg/kg	0	1	0.016	0.016

Table 2: Station Exposure Point Concentrations for Crayfish

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Metal	Chromium	mg/kg	0	1	0.4	0.4
Metal	Copper	mg/kg	0	1	12.3	12.3
Metal	Lead	mg/kg	0	1	0.069	0.069
Metal	Manganese	mg/kg	0	1	137	137
Metal	Mercury	mg/kg	0	1	0.024	0.024
Metal	Nickel	mg/kg	0	1	0.3	0.3
Metal	Silver	mg/kg	0	1	0.029	0.029
Metal	Thallium	mg/kg	0	1	0.005	0.005
Metal	Zinc	mg/kg	0	1	17.6	17.6
DDE	Total DDE	ug/kg			4.8	4.8
DDT	Total DDT	ug/kg			2.2	2.2
Endosulfan	Total Endosulfan	ug/kg			1	1
River Mile: 3, Station: 2, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	93.3	93.3
Metal	Antimony	mg/kg	0	1	0.006	0.006
Metal	Arsenic, total	mg/kg	0	1	0.41	0.41
Metal	Arsenic, inorganic	mg/kg	0	1	0.041	0.041
Metal	Cadmium	mg/kg	0	1	0.018	0.018
Metal	Chromium	mg/kg	0	1	0.4	0.4
Metal	Copper	mg/kg	0	1	14.7	14.7
Metal	Lead	mg/kg	0	1	0.044	0.044
Metal	Manganese	mg/kg	0	1	156	156
Metal	Mercury	mg/kg	0	1	0.027	0.027
Metal	Nickel	mg/kg	0	1	0.36	0.36
Metal	Silver	mg/kg	0	1	0.029	0.029
Metal	Thallium	mg/kg	0	1	0.005	0.005
Metal	Zinc	mg/kg	0	1	17.5	17.5
Pesticide	Endrin	ug/kg	0	1	1.3	1.3
DDE	Total DDE	ug/kg			3.8	3.8
DDT	Total DDT	ug/kg			2.1	2.1
Endosulfan	Total Endosulfan	ug/kg			1.4	1.4
River Mile: 3, Station: 3, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	151	151
Metal	Antimony	mg/kg	0	1	0.006	0.006
Metal	Arsenic, total	mg/kg	0	1	0.38	0.38
Metal	Arsenic, inorganic	mg/kg	0	1	0.038	0.038
Metal	Cadmium	mg/kg	0	1	0.029	0.029
Metal	Chromium	mg/kg	0	1	0.5	0.5
Metal	Copper	mg/kg	0	1	17	17
Metal	Lead	mg/kg	0	1	0.088	0.088
Metal	Manganese	mg/kg	0	1	158	158
Metal	Mercury	mg/kg	0	1	0.029	0.029
Metal	Nickel	mg/kg	0	1	0.42	0.42
Metal	Silver	mg/kg	0	1	0.042	0.042
Metal	Thallium	mg/kg	0	1	0.005	0.005
Metal	Zinc	mg/kg	0	1	19.8	19.8
Pesticide	Endrin	ug/kg	0	1	1.1	1.1
PCB Congener	Total Congeners	ug/kg			76.1	76.1
PCB Congener	Total Dioxin-like Congeners	ug/kg			5.98	5.98
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			70.1	70.1
Total Dioxin TEQ		ng/kg			0.676	0.676

Table 2: Station Exposure Point Concentrations for Crayfish

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Total PCB TEQ		ng/kg			1.91	1.91
Total TEQ		ng/kg			2.59	2.59
DDE	Total DDE	ug/kg			3.5	3.5
DDT	Total DDT	ug/kg			6.9	6.9
Endosulfan	Total Endosulfan	ug/kg			1.1	1.1
River Mile: 3, Station: 4, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	109	109
Metal	Antimony	mg/kg	0	1	0.014	0.014
Metal	Arsenic, total	mg/kg	0	1	0.36	0.36
Metal	Arsenic, inorganic	mg/kg	0	1	0.036	0.036
Metal	Cadmium	mg/kg	0	1	0.02	0.02
Metal	Chromium	mg/kg	0	1	0.6	0.6
Metal	Copper	mg/kg	0	1	15.8	15.8
Metal	Lead	mg/kg	0	1	0.1	0.1
Metal	Manganese	mg/kg	0	1	89.7	89.7
Metal	Mercury	mg/kg	0	1	0.025	0.025
Metal	Nickel	mg/kg	0	1	0.4	0.4
Metal	Silver	mg/kg	0	1	0.046	0.046
Metal	Thallium	mg/kg	0	1	0.003	0.003
Metal	Zinc	mg/kg	0	1	18.2	18.2
Phenol	4-Methylphenol	ug/kg	0	1	190	190
Phenol	Phenol	ug/kg	0	1	520	520
PCB Congener	Total Congeners	ug/kg			31.5	31.5
PCB Congener	Total Dioxin-like Congeners	ug/kg			4.96	4.96
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			26.6	26.6
Total Dioxin TEQ		ng/kg			0.707	0.707
Total PCB TEQ		ng/kg			1.66	1.66
Total TEQ		ng/kg			2.37	2.37
DDE	Total DDE	ug/kg			3.7	3.7
DDT	Total DDT	ug/kg			5.2	5.2
Endosulfan	Total Endosulfan	ug/kg			3.1	3.1
River Mile: 3, Station: 5, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	66.1	66.1
Metal	Antimony	mg/kg	0	1	0.015	0.015
Metal	Arsenic, total	mg/kg	0	1	0.3	0.3
Metal	Arsenic, inorganic	mg/kg	0	1	0.03	0.03
Metal	Cadmium	mg/kg	0	1	0.03	0.03
Metal	Chromium	mg/kg	0	1	0.3	0.3
Metal	Copper	mg/kg	0	1	11.8	11.8
Metal	Lead	mg/kg	0	1	0.154	0.154
Metal	Manganese	mg/kg	0	1	190	190
Metal	Mercury	mg/kg	0	1	0.022	0.022
Metal	Nickel	mg/kg	0	1	0.3	0.3
Metal	Silver	mg/kg	0	1	0.015	0.015
Metal	Thallium	mg/kg	0	1	0.002	0.002
Metal	Zinc	mg/kg	0	1	14.8	14.8
Pesticide	Endrin	ug/kg	0	1	2.8	2.8
PCB Aroclor	Total Aroclors	ug/kg			280	280
PCB Congener	Total Congeners	ug/kg			207	207
PCB Congener	Total Dioxin-like Congeners	ug/kg			13.8	13.8
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			193	193

Table 2: Station Exposure Point Concentrations for Crayfish

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Total Dioxin TEQ		ng/kg			0.646	0.646
Total PCB TEQ		ng/kg			4.42	4.42
Total TEQ		ng/kg			5.06	5.06
DDE	Total DDE	ug/kg			3.5	3.5
Chlordanes	Total Chlordane	ug/kg			1	1
Endosulfan	Total Endosulfan	ug/kg			1.6	1.6
River Mile: 3, Station: 32, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	59.4	59.4
Metal	Antimony	mg/kg	0	1	0.006	0.006
Metal	Arsenic, total	mg/kg	0	1	0.45	0.45
Metal	Arsenic, inorganic	mg/kg	0	1	0.045	0.045
Metal	Cadmium	mg/kg	0	1	0.012	0.012
Metal	Chromium	mg/kg	0	1	0.5	0.5
Metal	Copper	mg/kg	0	1	13.1	13.1
Metal	Lead	mg/kg	0	1	0.041	0.041
Metal	Manganese	mg/kg	0	1	132	132
Metal	Mercury	mg/kg	0	1	0.028	0.028
Metal	Nickel	mg/kg	0	1	0.38	0.38
Metal	Silver	mg/kg	0	1	0.035	0.035
Metal	Thallium	mg/kg	0	1	0.004	0.004
Metal	Zinc	mg/kg	0	1	17.4	17.4
DDE	Total DDE	ug/kg			3.4	3.4
DDT	Total DDT	ug/kg			3.6	3.6
River Mile: 4, Station: 2, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	86.2	86.2
Metal	Antimony	mg/kg	0	1	0.009	0.009
Metal	Arsenic, total	mg/kg	0	1	0.39	0.39
Metal	Arsenic, inorganic	mg/kg	0	1	0.039	0.039
Metal	Cadmium	mg/kg	0	1	0.022	0.022
Metal	Chromium	mg/kg	0	1	0.2	0.2
Metal	Copper	mg/kg	0	1	15.4	15.4
Metal	Lead	mg/kg	0	1	1.3	1.3
Metal	Manganese	mg/kg	0	1	118	118
Metal	Mercury	mg/kg	0	1	0.035	0.035
Metal	Nickel	mg/kg	0	1	0.275	0.275
Metal	Silver	mg/kg	0	1	0.043	0.043
Metal	Thallium	mg/kg	0	1	0.002	0.002
Metal	Zinc	mg/kg	0	1	17	17
DDE	Total DDE	ug/kg			4	4
DDT	Total DDT	ug/kg			1.9	1.9
River Mile: 4, Station: 3, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	62.8	62.8
Metal	Antimony	mg/kg	0	1	0.01	0.01
Metal	Arsenic, total	mg/kg	0	1	0.37	0.37
Metal	Arsenic, inorganic	mg/kg	0	1	0.037	0.037
Metal	Cadmium	mg/kg	0	1	0.025	0.025
Metal	Chromium	mg/kg	0	1	0.2	0.2
Metal	Copper	mg/kg	0	1	15.4	15.4
Metal	Lead	mg/kg	0	1	0.229	0.229
Metal	Manganese	mg/kg	0	1	112	112
Metal	Mercury	mg/kg	0	1	0.022	0.022

Table 2: Station Exposure Point Concentrations for Crayfish

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Metal	Silver	mg/kg	0	1	0.047	0.047
Metal	Thallium	mg/kg	0	1	0.002	0.002
Metal	Zinc	mg/kg	0	1	17	17
PAH	Fluoranthene	ug/kg	0	1	93	93
DDD	Total DDD	ug/kg			1.2	1.2
DDE	Total DDE	ug/kg			7.2	7.2
DDT	Total DDT	ug/kg			9.5	9.5
Endosulfan	Total Endosulfan	ug/kg			1.6	1.6
River Mile: 4, Station: 4, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	2	105	131
Metal	Antimony	mg/kg	0	2	0.008	0.01
Metal	Arsenic, total	mg/kg	0	2	0.37	0.39
Metal	Arsenic, inorganic	mg/kg	0	2	0.037	0.039
Metal	Cadmium	mg/kg	0	2	0.013	0.013
Metal	Chromium	mg/kg	0	2	0.3	0.4
Metal	Copper	mg/kg	0	2	11.7	11.9
Metal	Lead	mg/kg	0	2	0.102	0.107
Metal	Manganese	mg/kg	0	2	155	165
Metal	Mercury	mg/kg	0	2	0.031	0.037
Metal	Nickel	mg/kg	0	2	0.305	0.39
Metal	Silver	mg/kg	0	2	0.028	0.032
Metal	Thallium	mg/kg	0	2	0.003	0.003
Metal	Zinc	mg/kg	0	2	14.7	15.7
PAH	Fluoranthene	ug/kg	1	2	78.3	110
PAH	Pyrene	ug/kg	1	2	42.5	60
DDE	Total DDE	ug/kg			4.5	6.9
DDT	Total DDT	ug/kg			1.3	2.1
Chlordanes	Total Chlordane	ug/kg			1.6	2.7
River Mile: 5, Station: 1, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	88.9	88.9
Metal	Antimony	mg/kg	0	1	0.006	0.006
Metal	Arsenic, total	mg/kg	0	1	0.35	0.35
Metal	Arsenic, inorganic	mg/kg	0	1	0.035	0.035
Metal	Cadmium	mg/kg	0	1	0.009	0.009
Metal	Chromium	mg/kg	0	1	0.4	0.4
Metal	Copper	mg/kg	0	1	13.1	13.1
Metal	Lead	mg/kg	0	1	0.083	0.083
Metal	Manganese	mg/kg	0	1	110	110
Metal	Mercury	mg/kg	0	1	0.031	0.031
Metal	Nickel	mg/kg	0	1	0.29	0.29
Metal	Silver	mg/kg	0	1	0.028	0.028
Metal	Thallium	mg/kg	0	1	0.003	0.003
Metal	Zinc	mg/kg	0	1	15.9	15.9
DDE	Total DDE	ug/kg			5.2	5.2
DDT	Total DDT	ug/kg			1.7	1.7
Chlordanes	Total Chlordane	ug/kg			1.9	1.9
Endosulfan	Total Endosulfan	ug/kg			1.7	1.7
River Mile: 5, Station: 3, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	96.7	96.7
Metal	Antimony	mg/kg	0	1	0.02	0.02
Metal	Arsenic, total	mg/kg	0	1	0.35	0.35

Table 2: Station Exposure Point Concentrations for Crayfish

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Metal	Arsenic, inorganic	mg/kg	0	1	0.035	0.035
Metal	Cadmium	mg/kg	0	1	0.036	0.036
Metal	Chromium	mg/kg	0	1	0.9	0.9
Metal	Copper	mg/kg	0	1	16.9	16.9
Metal	Lead	mg/kg	0	1	0.11	0.11
Metal	Manganese	mg/kg	0	1	112	112
Metal	Mercury	mg/kg	0	1	0.039	0.039
Metal	Nickel	mg/kg	0	1	0.59	0.59
Metal	Silver	mg/kg	0	1	0.024	0.024
Metal	Thallium	mg/kg	0	1	0.003	0.003
Metal	Zinc	mg/kg	0	1	18.9	18.9
Pesticide	Endrin	ug/kg	0	1	1.2	1.2
PCB Aroclor	Total Aroclors	ug/kg			27	27
DDE	Total DDE	ug/kg			8	8
Endosulfan	Total Endosulfan	ug/kg			1.3	1.3
River Mile: 6, Station: 1, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	107	107
Metal	Arsenic, total	mg/kg	0	1	0.32	0.32
Metal	Arsenic, inorganic	mg/kg	0	1	0.032	0.032
Metal	Cadmium	mg/kg	0	1	0.011	0.011
Metal	Chromium	mg/kg	0	1	0.9	0.9
Metal	Copper	mg/kg	0	1	14.9	14.9
Metal	Lead	mg/kg	0	1	0.071	0.071
Metal	Manganese	mg/kg	0	1	115	115
Metal	Mercury	mg/kg	0	1	0.041	0.041
Metal	Nickel	mg/kg	0	1	0.51	0.51
Metal	Silver	mg/kg	0	1	0.032	0.032
Metal	Thallium	mg/kg	0	1	0.002	0.002
Metal	Zinc	mg/kg	0	1	15	15
DDE	Total DDE	ug/kg			4.6	4.6
DDT	Total DDT	ug/kg			1.2	1.2
Endosulfan	Total Endosulfan	ug/kg			2.1	2.1
River Mile: 6, Station: 4, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	2	137	145
Metal	Antimony	mg/kg	0	2	0.006	0.006
Metal	Arsenic, total	mg/kg	0	2	0.365	0.38
Metal	Arsenic, inorganic	mg/kg	0	2	0.0365	0.038
Metal	Cadmium	mg/kg	0	2	0.019	0.02
Metal	Chromium	mg/kg	0	2	0.65	0.8
Metal	Copper	mg/kg	0	2	15.3	16.4
Metal	Lead	mg/kg	0	2	0.085	0.088
Metal	Manganese	mg/kg	0	2	203	213
Metal	Mercury	mg/kg	0	2	0.032	0.034
Metal	Nickel	mg/kg	0	2	0.455	0.5
Metal	Silver	mg/kg	0	2	0.03	0.031
Metal	Thallium	mg/kg	0	2	0.003	0.004
Metal	Zinc	mg/kg	0	2	19.3	20.3
PAH	Benz(a)anthracene	ug/kg	1	2	48.3	80
PAH	Chrysene	ug/kg	1	2	51.8	87
PAH	Fluoranthene	ug/kg	1	2	73.3	130
PAH	Phenanthrene	ug/kg	1	2	56.8	97

Table 2: Station Exposure Point Concentrations for Crayfish

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
PAH	Pyrene	ug/kg	1	2	54	83
PCB Congener	Total Congeners	ug/kg			15.4	16.6
PCB Congener	Total Dioxin-like Congeners	ug/kg			1.99	2.16
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			13.4	14.8
Total Dioxin TEQ		ng/kg			1.52	1.69
Total PCB TEQ		ng/kg			0.539	0.59
Total TEQ		ng/kg			2.06	2.28
DDD	Total DDD	ug/kg			6.25	9.6
DDE	Total DDE	ug/kg			6.05	8.8
DDT	Total DDT	ug/kg			2.35	3.1
River Mile: 6, Station: 31, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	101	101
Metal	Antimony	mg/kg	0	1	0.006	0.006
Metal	Arsenic, total	mg/kg	0	1	0.26	0.26
Metal	Arsenic, inorganic	mg/kg	0	1	0.026	0.026
Metal	Cadmium	mg/kg	0	1	0.007	0.007
Metal	Chromium	mg/kg	0	1	0.7	0.7
Metal	Copper	mg/kg	0	1	11.4	11.4
Metal	Lead	mg/kg	0	1	0.077	0.077
Metal	Manganese	mg/kg	0	1	200	200
Metal	Mercury	mg/kg	0	1	0.029	0.029
Metal	Nickel	mg/kg	0	1	0.45	0.45
Metal	Silver	mg/kg	0	1	0.026	0.026
Metal	Thallium	mg/kg	0	1	0.003	0.003
Metal	Zinc	mg/kg	0	1	16.2	16.2
PCB Congener	Total Congeners	ug/kg			50.7	50.7
PCB Congener	Total Dioxin-like Congeners	ug/kg			1.79	1.79
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			48.9	48.9
Total Dioxin TEQ		ng/kg			2.16	2.16
Total PCB TEQ		ng/kg			0.611	0.611
Total TEQ		ng/kg			2.78	2.78
DDE	Total DDE	ug/kg			4.2	4.2
DDT	Total DDT	ug/kg			3	3
Endosulfan	Total Endosulfan	ug/kg			1.3	1.3
River Mile: 7, Station: 3, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	98.2	98.2
Metal	Arsenic, total	mg/kg	0	1	0.3	0.3
Metal	Arsenic, inorganic	mg/kg	0	1	0.03	0.03
Metal	Cadmium	mg/kg	0	1	0.015	0.015
Metal	Chromium	mg/kg	0	1	0.3	0.3
Metal	Copper	mg/kg	0	1	13.8	13.8
Metal	Lead	mg/kg	0	1	0.091	0.091
Metal	Manganese	mg/kg	0	1	117	117
Metal	Mercury	mg/kg	0	1	0.03	0.03
Metal	Nickel	mg/kg	0	1	0.3	0.3
Metal	Silver	mg/kg	0	1	0.019	0.019
Metal	Thallium	mg/kg	0	1	0.002	0.002
Metal	Zinc	mg/kg	0	1	16	16
PCB Aroclor	Total Aroclors	ug/kg			39	39
DDD	Total DDD	ug/kg			3.1	3.1
DDE	Total DDE	ug/kg			15	15

Table 2: Station Exposure Point Concentrations for Crayfish

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
DDT	Total DDT	ug/kg			17.5	17.5
River Mile: 7, Station: 4, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	203	203
Metal	Antimony	mg/kg	0	1	0.009	0.009
Metal	Arsenic, total	mg/kg	0	1	0.5	0.5
Metal	Arsenic, inorganic	mg/kg	0	1	0.05	0.05
Metal	Cadmium	mg/kg	0	1	0.016	0.016
Metal	Chromium	mg/kg	0	1	0.9	0.9
Metal	Copper	mg/kg	0	1	17.6	17.6
Metal	Lead	mg/kg	0	1	0.202	0.202
Metal	Manganese	mg/kg	0	1	171	171
Metal	Mercury	mg/kg	0	1	0.036	0.036
Metal	Nickel	mg/kg	0	1	0.55	0.55
Metal	Silver	mg/kg	0	1	0.039	0.039
Metal	Thallium	mg/kg	0	1	0.003	0.003
Metal	Zinc	mg/kg	0	1	19.1	19.1
DDE	Total DDE	ug/kg			6.4	6.4
DDT	Total DDT	ug/kg			1.5	1.5
Endosulfan	Total Endosulfan	ug/kg			2.2	2.2
River Mile: 7, Station: 6, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	58.7	58.7
Metal	Antimony	mg/kg	0	1	0.006	0.006
Metal	Arsenic, total	mg/kg	0	1	0.32	0.32
Metal	Arsenic, inorganic	mg/kg	0	1	0.032	0.032
Metal	Cadmium	mg/kg	0	1	0.009	0.009
Metal	Chromium	mg/kg	0	1	0.54	0.54
Metal	Copper	mg/kg	0	1	12.8	12.8
Metal	Lead	mg/kg	0	1	0.242	0.242
Metal	Manganese	mg/kg	0	1	130	130
Metal	Mercury	mg/kg	0	1	0.024	0.024
Metal	Nickel	mg/kg	0	1	0.83	0.83
Metal	Silver	mg/kg	0	1	0.032	0.032
Metal	Thallium	mg/kg	0	1	0.002	0.002
Metal	Zinc	mg/kg	0	1	15.5	15.5
PCB Aroclor	Total Aroclors	ug/kg	8	1	45	45
PCB Congener	Total Congeners	ug/kg			27.8	27.8
PCB Congener	Total Dioxin-like Congeners	ug/kg			3.59	3.59
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			24.3	24.3
Total Dioxin TEQ		ng/kg			22.7	22.7
Total PCB TEQ		ng/kg			1.13	1.13
Total TEQ		ng/kg			23.8	23.8
DDD	Total DDD	ug/kg			21.3	21.3
DDE	Total DDE	ug/kg			51	51
DDT	Total DDT	ug/kg			12.6	12.6
River Mile: 8, Station: 1, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	68.4	68.4
Metal	Antimony	mg/kg	0	1	0.007	0.007
Metal	Arsenic, total	mg/kg	0	1	0.35	0.35
Metal	Arsenic, inorganic	mg/kg	0	1	0.035	0.035
Metal	Cadmium	mg/kg	0	1	0.013	0.013
Metal	Chromium	mg/kg	0	1	0.28	0.28

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Table 2: Station Exposure Point Concentrations for Crayfish

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Metal	Copper	mg/kg	0	1	15	15
Metal	Lead	mg/kg	0	1	0.076	0.076
Metal	Manganese	mg/kg	0	1	123	123
Metal	Mercury	mg/kg	0	1	0.022	0.022
Metal	Nickel	mg/kg	0	1	0.28	0.28
Metal	Silver	mg/kg	0	1	0.024	0.024
Metal	Thallium	mg/kg	0	1	0.002	0.002
Metal	Zinc	mg/kg	0	1	15.2	15.2
Phenol	4-Methylphenol	ug/kg	0	1	33	33
PCB Aroclor	Total Aroclors	ug/kg			59	59
DDE	Total DDE	ug/kg			6.3	6.3
DDT	Total DDT	ug/kg			6.6	6.6
River Mile: 8, Station: 2, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	86.7	86.7
Metal	Antimony	mg/kg	0	1	0.005	0.005
Metal	Arsenic, total	mg/kg	0	1	0.28	0.28
Metal	Arsenic, inorganic	mg/kg	0	1	0.028	0.028
Metal	Cadmium	mg/kg	0	1	0.013	0.013
Metal	Chromium	mg/kg	0	1	0.38	0.38
Metal	Copper	mg/kg	0	1	10.4	10.4
Metal	Lead	mg/kg	0	1	0.104	0.104
Metal	Manganese	mg/kg	0	1	159	159
Metal	Mercury	mg/kg	0	1	0.033	0.033
Metal	Nickel	mg/kg	0	1	0.32	0.32
Metal	Thallium	mg/kg	0	1	0.002	0.002
Metal	Zinc	mg/kg	0	1	13.9	13.9
PCB Aroclor	Total Aroclors	ug/kg			16	16
DDE	Total DDE	ug/kg			3	3
DDT	Total DDT	ug/kg			2.9	2.9
River Mile: 8, Station: 3, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	67.1	67.1
Metal	Antimony	mg/kg	0	1	0.005	0.005
Metal	Arsenic, total	mg/kg	0	1	0.28	0.28
Metal	Arsenic, inorganic	mg/kg	0	1	0.028	0.028
Metal	Cadmium	mg/kg	0	1	0.016	0.016
Metal	Chromium	mg/kg	0	1	0.41	0.41
Metal	Copper	mg/kg	0	1	17	17
Metal	Lead	mg/kg	0	1	0.076	0.076
Metal	Manganese	mg/kg	0	1	71.8	71.8
Metal	Mercury	mg/kg	0	1	0.022	0.022
Metal	Nickel	mg/kg	0	1	0.27	0.27
Metal	Silver	mg/kg	0	1	0.022	0.022
Metal	Thallium	mg/kg	0	1	0.002	0.002
Metal	Zinc	mg/kg	0	1	15.7	15.7
Phenol	Pentachlorophenol	ug/kg	0	1	130	130
PCB Aroclor	Total Aroclors	ug/kg			43	43
PCB Congener	Total Congeners	ug/kg			38.2	38.2
PCB Congener	Total Dioxin-like Congeners	ug/kg			2.88	2.88
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			35.3	35.3
Total Dioxin TEQ		ng/kg			1.05	1.05
Total PCB TEQ		ng/kg			1.07	1.07

Table 2: Station Exposure Point Concentrations for Crayfish

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Total TEQ		ng/kg			2.12	2.12
DDE	Total DDE	ug/kg			3.4	3.4
River Mile: 9, Station: 1, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	2	51.4	67.8
Metal	Antimony	mg/kg	0	2	0.006	0.007
Metal	Arsenic, total	mg/kg	0	2	0.295	0.34
Metal	Arsenic, inorganic	mg/kg	0	2	0.0295	0.034
Metal	Cadmium	mg/kg	0	2	0.022	0.023
Metal	Chromium	mg/kg	0	2	0.125	0.16
Metal	Copper	mg/kg	0	2	15.7	17.6
Metal	Lead	mg/kg	0	2	0.104	0.113
Metal	Manganese	mg/kg	0	2	59.9	60.8
Metal	Mercury	mg/kg	0	2	0.022	0.023
Metal	Nickel	mg/kg	0	2	0.2	0.22
Metal	Silver	mg/kg	1	2	0.02	0.031
Metal	Thallium	mg/kg	0	2	0.002	0.002
Metal	Zinc	mg/kg	0	2	15.7	17
PCB Aroclor	Total Aroclors	ug/kg			47.5	49
DDE	Total DDE	ug/kg			1.75	1.9
River Mile: 9, Station: 2, Organism: Crayfish, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	66	66
Metal	Antimony	mg/kg	0	1	0.008	0.008
Metal	Arsenic, total	mg/kg	0	1	0.35	0.35
Metal	Arsenic, inorganic	mg/kg	0	1	0.035	0.035
Metal	Cadmium	mg/kg	0	1	0.011	0.011
Metal	Chromium	mg/kg	0	1	0.26	0.26
Metal	Copper	mg/kg	0	1	13.6	13.6
Metal	Lead	mg/kg	0	1	0.098	0.098
Metal	Manganese	mg/kg	0	1	151	151
Metal	Mercury	mg/kg	0	1	0.03	0.03
Metal	Nickel	mg/kg	0	1	0.4	0.4
Metal	Silver	mg/kg	0	1	0.035	0.035
Metal	Thallium	mg/kg	0	1	0.003	0.003
Metal	Zinc	mg/kg	0	1	19	19
PCB Aroclor	Total Aroclors	ug/kg			110	110
PCB Congener	Total Congeners	ug/kg			82.6	82.6
PCB Congener	Total Dioxin-like Congeners	ug/kg			4.23	4.23
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			78.4	78.4
Total Dioxin TEQ		ng/kg			0.79	0.79
Total PCB TEQ		ng/kg			1.41	1.41
Total TEQ		ng/kg			2.20	2.20
DDE	Total DDE	ug/kg			2.5	2.5

Table 3: River Mile Exposure Point Concentrations for Smallmouth Bass

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
River Mile: 3, Organism: Smallmouth Bass, Tissue: Fillet						
Metal	Aluminum	mg/kg	0	1	3.4	3.4
Metal	Arsenic, total	mg/kg	0	1	0.28	0.28
Metal	Arsenic, inorganic	mg/kg	0	1	0.028	0.028
Metal	Copper	mg/kg	0	1	0.935	0.935
Metal	Manganese	mg/kg	0	1	0.087	0.087
Metal	Mercury	mg/kg	0	1	0.129	0.129
Metal	Nickel	mg/kg	0	1	0.124	0.124
Metal	Thallium	mg/kg	0	1	0.01	0.01
Metal	Zinc	mg/kg	0	1	8	8
Pesticide	beta-Hexachlorocyclohexane	ug/kg	0	1	4.5	4.5
Pesticide	Dieldrin	ug/kg	0	1	3.3	3.3
Pesticide	Endrin aldehyde	ug/kg	0	1	2	2
PCB Aroclor	Total Aroclors	ug/kg			60	60
DDD	Total DDD	ug/kg			4.1	4.1
DDE	Total DDE	ug/kg			25	25
DDT	Total DDT	ug/kg			12.9	12.9
Chlordanes	Total Chlordane	ug/kg			4.1	4.1
River Mile: 3, Organism: Smallmouth Bass, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	2.12	2.12
Metal	Antimony	mg/kg	0	1	0.001	0.001
Metal	Arsenic, total	mg/kg	0	1	0.39	0.39
Metal	Arsenic, inorganic	mg/kg	0	1	0.039	0.039
Metal	Cadmium	mg/kg	0	1	0.008	0.008
Metal	Chromium	mg/kg	0	1	0.3	0.3
Metal	Copper	mg/kg	0	1	0.375	0.375
Metal	Lead	mg/kg	0	1	0.006	0.006
Metal	Manganese	mg/kg	0	1	1.06	1.06
Metal	Mercury	mg/kg	0	1	0.096	0.096
Metal	Nickel	mg/kg	0	1	0.08	0.08
Metal	Thallium	mg/kg	0	1	0.009	0.009
Metal	Zinc	mg/kg	0	1	16.3	16.3
Phtalate	Di-n-octyl phthalate	ug/kg	0	1	1,100	1,100
PCB Aroclor	Total Aroclors	ug/kg			780	780
PCB Congener	Total Congeners	ug/kg			935	935
PCB Congener	Total Dioxin-like Congeners	ug/kg			82.8	82.8
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			852	852
Total Dioxin TEQ		ng/kg			1.90	1.90
Total PCB TEQ		ng/kg			21.2	21.2
Total TEQ		ng/kg			23.1	23.1
DDD	Total DDD	ug/kg			30.5	30.5
DDE	Total DDE	ug/kg			145	145
DDT	Total DDT	ug/kg			15	15
River Mile: 4, Organism: Smallmouth Bass, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	3	6.03	11
Metal	Arsenic, total	mg/kg	0	3	0.323	0.34
Metal	Arsenic, inorganic	mg/kg	0	3	0.0323	0.034
Metal	Cadmium	mg/kg	0	3	0.005	0.008
Metal	Chromium	mg/kg	0	3	0.74	0.98
Metal	Copper	mg/kg	0	3	0.458	0.61
Metal	Lead	mg/kg	0	3	0.022	0.054

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Table 3: River Mile Exposure Point Concentrations for Smallmouth Bass

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Metal	Manganese	mg/kg	0	3	0.912	0.986
Metal	Mercury	mg/kg	0	3	0.084	0.114
Metal	Nickel	mg/kg	0	3	0.15	0.2
Metal	Thallium	mg/kg	0	3	0.006	0.008
Metal	Zinc	mg/kg	0	3	14.2	15.2
PAH	Acenaphthene	ug/kg	2	3	22.2	36
PAH	Fluoranthene	ug/kg	2	3	22.2	36
PAH	Pyrene	ug/kg	2	3	23.2	39
Phthalate	Bis(2-ethylhexyl) phthalate	ug/kg	1	3	39,782	87,000
Phthalate	Di-n-octyl phthalate	ug/kg	1	3	903	2,100
PCB Aroclor	Total Aroclors	ug/kg			780	1,280
PCB Congener	Total Congeners	ug/kg			629	918
PCB Congener	Total Dioxin-like Congeners	ug/kg			55.6	83.8
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			573	835
Total Dioxin TEQ		ng/kg			2.72	3.66
Total PCB TEQ		ng/kg			14.6	21.2
Total TEQ		ng/kg			17.3	23.6
DDD	Total DDD	ug/kg			42	56.6
DDE	Total DDE	ug/kg			153	220
DDT	Total DDT	ug/kg			11.1	27
River Mile: 5, Organism: Smallmouth Bass, Tissue: Fillet						
Metal	Aluminum	mg/kg	0	1	3.83	3.83
Metal	Arsenic, total	mg/kg	0	1	0.2	0.2
Metal	Arsenic, inorganic	mg/kg	0	1	0.02	0.02
Metal	Copper	mg/kg	0	1	1.12	1.12
Metal	Lead	mg/kg	0	1	0.011	0.011
Metal	Manganese	mg/kg	0	1	0.076	0.076
Metal	Mercury	mg/kg	0	1	0.087	0.087
Metal	Nickel	mg/kg	0	1	0.224	0.224
Metal	Thallium	mg/kg	0	1	0.003	0.003
Metal	Zinc	mg/kg	0	1	10.9	10.9
Pesticide	Endrin aldehyde	ug/kg	0	1	1.5	1.5
PCB Aroclor	Total Aroclors	ug/kg			46	46
DDD	Total DDD	ug/kg			4.2	4.2
DDE	Total DDE	ug/kg			14	14
DDT	Total DDT	ug/kg			9.5	9.5
River Mile: 5, Organism: Smallmouth Bass, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	2.71	2.71
Metal	Arsenic, total	mg/kg	0	1	0.3	0.3
Metal	Arsenic, inorganic	mg/kg	0	1	0.03	0.03
Metal	Cadmium	mg/kg	0	1	0.008	0.008
Metal	Chromium	mg/kg	0	1	0.44	0.44
Metal	Copper	mg/kg	0	1	0.481	0.481
Metal	Lead	mg/kg	0	1	0.006	0.006
Metal	Manganese	mg/kg	0	1	1.37	1.37
Metal	Mercury	mg/kg	0	1	0.078	0.078
Metal	Nickel	mg/kg	0	1	0.07	0.07
Metal	Thallium	mg/kg	0	1	0.004	0.004
Metal	Zinc	mg/kg	0	1	14.1	14.1
PAH	Fluorene	ug/kg	0	1	31	31
PCB Aroclor	Total Aroclors	ug/kg			390	390

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Table 3: River Mile Exposure Point Concentrations for Smallmouth Bass

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
PCB Congener	Total Congeners	ug/kg			417	417
PCB Congener	Total Dioxin-like Congeners	ug/kg			39.1	39.1
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			378	378
Total Dioxin TEQ		ng/kg			2.42	2.42
Total PCB TEQ		ng/kg			10.5	10.5
Total TEQ		ng/kg			12.9	12.9
DDD	Total DDD	ug/kg			35	35
DDE	Total DDE	ug/kg			108	108
DDT	Total DDT	ug/kg			35	35
River Mile: 6, Organism: Smallmouth Bass, Tissue: Fillet						
Metal	Aluminum	mg/kg	0	1	7.15	7.15
Metal	Arsenic, total	mg/kg	0	1	0.2	0.2
Metal	Arsenic, inorganic	mg/kg	0	1	0.02	0.02
Metal	Cadmium	mg/kg	0	1	0.001	0.001
Metal	Copper	mg/kg	0	1	0.248	0.248
Metal	Manganese	mg/kg	0	1	0.094	0.094
Metal	Mercury	mg/kg	0	1	0.073	0.073
Metal	Nickel	mg/kg	0	1	0.008	0.008
Metal	Thallium	mg/kg	0	1	0.004	0.004
Metal	Zinc	mg/kg	0	1	8.38	8.38
PCB Aroclor	Total Aroclors	ug/kg			39	39
DDD	Total DDD	ug/kg			6.4	6.4
DDE	Total DDE	ug/kg			12	12
DDT	Total DDT	ug/kg			7.6	7.6
Chlordanes	Total Chlordane	ug/kg			1.8	1.8
River Mile: 6, Organism: Smallmouth Bass, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	5.55	5.55
Metal	Antimony	mg/kg	0	1	0.001	0.001
Metal	Arsenic, total	mg/kg	0	1	0.21	0.21
Metal	Arsenic, inorganic	mg/kg	0	1	0.021	0.021
Metal	Cadmium	mg/kg	0	1	0.024	0.024
Metal	Copper	mg/kg	0	1	0.809	0.809
Metal	Lead	mg/kg	0	1	0.011	0.011
Metal	Manganese	mg/kg	0	1	0.445	0.445
Metal	Mercury	mg/kg	0	1	0.106	0.106
Metal	Nickel	mg/kg	0	1	0.16	0.16
Metal	Thallium	mg/kg	0	1	0.002	0.002
Metal	Zinc	mg/kg	0	1	16	16
PCB Aroclor	Total Aroclors	ug/kg			252	252
PCB Congener	Total Congeners	ug/kg			344	344
PCB Congener	Total Dioxin-like Congeners	ug/kg			23.7	23.7
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			321	321
Total Dioxin TEQ		ng/kg			1.45	1.45
Total PCB TEQ		ng/kg			7.92	7.92
Total TEQ		ng/kg			9.37	9.37
DDD	Total DDD	ug/kg			19	19
DDE	Total DDE	ug/kg			105	105
DDT	Total DDT	ug/kg			17	17
River Mile: 7, Organism: Smallmouth Bass, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	3	5.27	6.14
Metal	Arsenic, total	mg/kg	0	3	0.252	0.29

Table 3: River Mile Exposure Point Concentrations for Smallmouth Bass

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Metal	Arsenic, inorganic	mg/kg	0	3	0.0252	0.029
Metal	Cadmium	mg/kg	2	3	0.001	0.002
Metal	Chromium	mg/kg	0	3	0.475	0.66
Metal	Copper	mg/kg	0	3	0.622	0.953
Metal	Lead	mg/kg	0	3	0.015	0.034
Metal	Manganese	mg/kg	0	3	1.47	2.05
Metal	Mercury	mg/kg	0	3	0.088	0.1
Metal	Nickel	mg/kg	2	3	0.052	0.13
Metal	Selenium	mg/kg	1	3	0.283	0.4
Metal	Thallium	mg/kg	0	3	0.004	0.004
Metal	Zinc	mg/kg	0	3	15.0	16
PAH	2-Methylnaphthalene	ug/kg	0	3	49.3	59
PAH	Acenaphthene	ug/kg	1	3	63.3	95
PAH	Fluorene	ug/kg	1	3	43.5	69
PAH	Naphthalene	ug/kg	1	3	51.2	86
PAH	Phenanthrene	ug/kg	1	3	48.8	85
SVOC	Dibenzofuran	ug/kg	1	3	37.8	52
PCB Aroclor	Total Aroclors	ug/kg			460.5	780
PCB Congener	Total Congeners	ug/kg			527	549
PCB Congener	Total Dioxin-like Congeners	ug/kg			34.7	37.7
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			493	515
Total Dioxin TEQ		ng/kg			8.60	10.4
Total PCB TEQ		ng/kg			9.74	10.6
Total TEQ		ng/kg			18.3	21.0
DDD	Total DDD	ug/kg			89.8	139
DDE	Total DDE	ug/kg			177	190
DDT	Total DDT	ug/kg			104	160
Chlordanes	Total Chlordane	ug/kg			4.33	5.6
River Mile: 8 (Swan Island Lagoon), Organism: Smallmouth Bass, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	3	6.36	7.67
Metal	Arsenic, total	mg/kg	0	3	0.183	0.2
Metal	Arsenic, inorganic	mg/kg	0	3	0.0183	0.02
Metal	Cadmium	mg/kg	0	3	0.005	0.009
Metal	Chromium	mg/kg	1	3	0.738	1.14
Metal	Copper	mg/kg	0	3	0.823	0.952
Metal	Lead	mg/kg	0	3	0.148	0.303
Metal	Manganese	mg/kg	0	3	1.30	1.84
Metal	Mercury	mg/kg	0	3	0.06	0.076
Metal	Thallium	mg/kg	0	3	0.003	0.003
Metal	Zinc	mg/kg	0	3	14.2	14.5
PAH	2-Methylnaphthalene	ug/kg	2	3	25.7	45
PAH	Acenaphthene	ug/kg	2	3	23.8	40
PCB Aroclor	Total Aroclors	ug/kg			2,933	4,500
PCB Congener	Total Congeners	ug/kg			3,025	4,529
PCB Congener	Total Dioxin-like Congeners	ug/kg			84.8	121
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			2,941	4,407
Total Dioxin TEQ		ng/kg			3.67	4.20
Total PCB TEQ		ng/kg			24.7	33.9
Total TEQ		ng/kg			28.4	38.1
DDD	Total DDD	ug/kg			16.2	25.5
DDE	Total DDE	ug/kg			75.7	92.5

Table 3: River Mile Exposure Point Concentrations for Smallmouth Bass

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
DDT	Total DDT	ug/kg			4.53	7.3
Endosulfan	Total Endosulfan	ug/kg			7.8	10
River Mile: 8, Organism: Smallmouth Bass, Tissue: Fillet						
Metal	Aluminum	mg/kg	0	1	3.52	3.52
Metal	Arsenic, total	mg/kg	0	1	0.18	0.18
Metal	Arsenic, inorganic	mg/kg	0	1	0.018	0.018
Metal	Cadmium	mg/kg	0	1	0.001	0.001
Metal	Copper	mg/kg	0	1	0.187	0.187
Metal	Manganese	mg/kg	0	1	0.084	0.084
Metal	Mercury	mg/kg	0	1	0.113	0.113
Metal	Nickel	mg/kg	0	1	0.004	0.004
Metal	Thallium	mg/kg	0	1	0.003	0.003
Metal	Zinc	mg/kg	0	1	8.67	8.67
Pesticide	Dieldrin	ug/kg	0	1	1.4	1.4
PCB Aroclor	Total Aroclors	ug/kg			93	93
DDD	Total DDD	ug/kg			2.7	2.7
DDE	Total DDE	ug/kg			16	16
DDT	Total DDT	ug/kg			15.2	15.2
Chlordanes	Total Chlordane	ug/kg			3	3
River Mile: 8, Organism: Smallmouth Bass, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	4.78	4.78
Metal	Arsenic, total	mg/kg	0	1	0.25	0.25
Metal	Arsenic, inorganic	mg/kg	0	1	0.025	0.025
Metal	Chromium	mg/kg	0	1	0.24	0.24
Metal	Copper	mg/kg	0	1	0.464	0.464
Metal	Lead	mg/kg	0	1	0.005	0.005
Metal	Manganese	mg/kg	0	1	0.897	0.897
Metal	Mercury	mg/kg	0	1	0.105	0.105
Metal	Thallium	mg/kg	0	1	0.003	0.003
Metal	Zinc	mg/kg	0	1	14.9	14.9
Pesticide	Dieldrin	ug/kg	0	1	7.3	7.3
PCB Aroclor	Total Aroclors	ug/kg			880	880
PCB Congener	Total Congeners	ug/kg			663	663
PCB Congener	Total Dioxin-like Congeners	ug/kg			41.4	41.4
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			621	621
Total Dioxin TEQ		ng/kg			2.96	2.96
Total PCB TEQ		ng/kg			12.2	12.2
Total TEQ		ng/kg			15.2	15.2
DDD	Total DDD	ug/kg			25	25
DDE	Total DDE	ug/kg			128	128
DDT	Total DDT	ug/kg			26	26
River Mile: 9, Organism: Smallmouth Bass, Tissue: Fillet						
Metal	Aluminum	mg/kg	0	1	2.54	2.54
Metal	Arsenic, total	mg/kg	0	1	0.19	0.19
Metal	Arsenic, inorganic	mg/kg	0	1	0.019	0.019
Metal	Copper	mg/kg	0	1	0.213	0.213
Metal	Manganese	mg/kg	0	1	0.08	0.08
Metal	Mercury	mg/kg	0	1	0.071	0.071
Metal	Nickel	mg/kg	0	1	0.005	0.005
Metal	Thallium	mg/kg	0	1	0.003	0.003
Metal	Zinc	mg/kg	0	1	9.6	9.6

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Table 3: River Mile Exposure Point Concentrations for Smallmouth Bass

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Pesticide	Dieldrin	ug/kg	0	1	1	1
PCB Aroclor	Total Aroclors	ug/kg			72	72
DDD	Total DDD	ug/kg			1.9	1.9
DDE	Total DDE	ug/kg			13	13
DDT	Total DDT	ug/kg			9.3	9.3
River Mile: 9, Organism: Smallmouth Bass, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	1	10.2	10.2
Metal	Arsenic, total	mg/kg	0	1	0.27	0.27
Metal	Arsenic, inorganic	mg/kg	0	1	0.027	0.027
Metal	Chromium	mg/kg	0	1	0.17	0.17
Metal	Copper	mg/kg	0	1	1.29	1.29
Metal	Lead	mg/kg	0	1	0.011	0.011
Metal	Manganese	mg/kg	0	1	2.65	2.65
Metal	Mercury	mg/kg	0	1	0.082	0.082
Metal	Selenium	mg/kg	0	1	0.3	0.3
Metal	Thallium	mg/kg	0	1	0.005	0.005
Metal	Zinc	mg/kg	0	1	14.5	14.5
PCB Aroclor	Total Aroclors	ug/kg			840	840
PCB Congener	Total Congeners	ug/kg			748	748
PCB Congener	Total Dioxin-like Congeners	ug/kg			71.6	71.6
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			677	677
Total Dioxin TEQ		ng/kg			3.19	3.19
Total PCB TEQ		ng/kg			20.4	20.4
Total TEQ		ng/kg			23.6	23.6
DDD	Total DDD	ug/kg			37.5	37.5
DDE	Total DDE	ug/kg			140	140

Table 4: Fishing Zone Exposure Point Concentrations for Carp

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Fishing Zone: 3 to 6, Organism: Carp, Tissue: Fillet						
Metal	Aluminum	mg/kg	0	3	1.83	2.68
Metal	Arsenic, total	mg/kg	0	3	0.11	0.16
Metal	Arsenic, inorganic	mg/kg	0	3	0.011	0.016
Metal	Cadmium	mg/kg	0	3	0.004	0.005
Metal	Chromium	mg/kg	0	3	0.603	1.49
Metal	Copper	mg/kg	0	3	0.341	0.376
Metal	Lead	mg/kg	2	3	0.006	0.012
Metal	Manganese	mg/kg	0	3	0.317	0.379
Metal	Mercury	mg/kg	0	3	0.169	0.191
Metal	Nickel	mg/kg	1	3	0.033	0.087
Metal	Thallium	mg/kg	0	3	0.003	0.003
Metal	Zinc	mg/kg	0	3	23.7	29.8
Pesticide	Methoxychlor	ug/kg	2	3	3.87	7.2
PCB Aroclor	Total Aroclors	ug/kg			693	1060
DDD	Total DDD	ug/kg			31.5	38
DDE	Total DDE	ug/kg			107	135
DDT	Total DDT	ug/kg			25.4	63
Chlordanes	Total Chlordane	ug/kg			2.77	4.3
Endosulfan	Total Endosulfan	ug/kg			2.7	4.1
Fishing Zone: 3 to 6, Organism: Carp, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	3	106	134
Metal	Arsenic, total	mg/kg	0	3	0.197	0.22
Metal	Arsenic, inorganic	mg/kg	0	3	0.0197	0.022
Metal	Cadmium	mg/kg	0	3	0.075	0.108
Metal	Chromium	mg/kg	0	3	1.55	2.02
Metal	Copper	mg/kg	0	3	1.17	1.42
Metal	Lead	mg/kg	0	3	0.15	0.17
Metal	Manganese	mg/kg	0	3	7.10	8.53
Metal	Mercury	mg/kg	0	3	0.041	0.043
Metal	Nickel	mg/kg	0	3	0.985	1.37
Metal	Selenium	mg/kg	0	3	0.3	0.3
Metal	Silver	mg/kg	1	3	0.009	0.013
Metal	Thallium	mg/kg	0	3	0.004	0.005
Metal	Zinc	mg/kg	0	3	90.6	96.7
Pesticide	Methoxychlor	ug/kg	2	3	3	4.2
PCB Aroclor	Total Aroclors	ug/kg			2,465	6,865
PCB Congener	Total Congeners	ug/kg			2,982	8,154
PCB Congener	Total Dioxin-like Congeners	ug/kg			65.8	150.42
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			2,917	8,003
Total Dioxin TEQ		ng/kg			5.27	11.1
Total PCB TEQ		ng/kg			17.5	38.8
Total TEQ		ng/kg			22.8	49.9
DDD	Total DDD	ug/kg			86.4	171
DDE	Total DDE	ug/kg			149	260
DDT	Total DDT	ug/kg			20.1	47
Chlordanes	Total Chlordane	ug/kg			16.2	25.5
Fishing Zone: 6 to 9, Organism: Carp, Tissue: Fillet						
Metal	Aluminum	mg/kg	0	3	1.67	1.97
Metal	Arsenic, total	mg/kg	0	3	0.083	0.1
Metal	Arsenic, inorganic	mg/kg	0	3	0.0083	0.01

Table 4: Fishing Zone Exposure Point Concentrations for Carp

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Metal	Cadmium	mg/kg	0	3	0.005	0.009
Metal	Copper	mg/kg	0	3	0.461	0.497
Metal	Lead	mg/kg	2	3	0.02	0.057
Metal	Manganese	mg/kg	0	3	0.239	0.318
Metal	Mercury	mg/kg	0	3	0.085	0.098
Metal	Nickel	mg/kg	0	3	0.04	0.057
Metal	Thallium	mg/kg	0	3	0.002	0.003
Metal	Zinc	mg/kg	0	3	23.0	24.6
SVOC	Hexachlorobenzene	ug/kg	1	3	49.1	140
PCB Aroclor	Total Aroclors	ug/kg			992	1,295
DDD	Total DDD	ug/kg			54.9	79.5
DDE	Total DDE	ug/kg			82.7	91.5
Fishing Zone: 6 to 9, Organism: Carp, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	3	87.6	111
Metal	Arsenic, total	mg/kg	0	3	0.135	0.14
Metal	Arsenic, inorganic	mg/kg	0	3	0.0135	0.014
Metal	Cadmium	mg/kg	0	3	0.062	0.071
Metal	Chromium	mg/kg	0	3	0.635	0.86
Metal	Copper	mg/kg	0	3	1.16	1.28
Metal	Lead	mg/kg	0	3	0.152	0.202
Metal	Manganese	mg/kg	0	3	5.35	6.11
Metal	Mercury	mg/kg	0	3	0.038	0.047
Metal	Nickel	mg/kg	0	3	0.505	0.569
Metal	Selenium	mg/kg	0	3	0.333	0.4
Metal	Silver	mg/kg	1	3	0.011	0.017
Metal	Thallium	mg/kg	0	3	0.002	0.002
Metal	Zinc	mg/kg	0	3	108	112
PAH	2-Methylnaphthalene	ug/kg	2	3	23.5	38
PAH	Acenaphthene	ug/kg	1	3	52	75
PAH	Fluorene	ug/kg	2	3	28.5	53
PAH	Naphthalene	ug/kg	1	3	39.3	56
PCB Aroclor	Total Aroclors	ug/kg			990	1,190
PCB Congener	Total Congeners	ug/kg			858	1,383
PCB Congener	Total Dioxin-like Congeners	ug/kg			28.2	33.8
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			830	1,350
Total Dioxin TEQ		ng/kg			4.31	5.66
Total PCB TEQ		ng/kg			8.87	9.99
Total TEQ		ng/kg			13.2	15.7
DDD	Total DDD	ug/kg			51.2	64.8
DDE	Total DDE	ug/kg			122	145
Chlordanes	Total Chlordane	ug/kg			5.08	8.3
Endosulfan	Total Endosulfan	ug/kg			2.53	3.6

Table 5: Fishing Zone Exposure Point Concentrations for Brown Bullhead

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Fishing Zone: 3 to 6, Organism: Brown Bullhead, Tissue: Fillet						
Metal	Aluminum	mg/kg	0	3	2.70	3.5
Metal	Arsenic, total	mg/kg	0	3	0.02	0.02
Metal	Arsenic, inorganic	mg/kg	0	3	0.002	0.002
Metal	Cadmium	mg/kg	0	3	0.001	0.001
Metal	Chromium	mg/kg	0	3	0.12	0.23
Metal	Copper	mg/kg	0	3	0.248	0.292
Metal	Manganese	mg/kg	0	3	0.097	0.107
Metal	Mercury	mg/kg	0	3	0.045	0.057
Metal	Nickel	mg/kg	0	3	0.028	0.055
Metal	Thallium	mg/kg	0	3	0.003	0.003
Metal	Zinc	mg/kg	0	3	5.58	6.49
PAH	Fluoranthene	ug/kg	2	3	71	110
PAH	Phenanthrene	ug/kg	1	3	99.3	140
Pesticide	Dieldrin	ug/kg	2	3	1.03	2.1
Phthalate	Bis(2-ethylhexyl) phthalate	ug/kg	2	3	66.7	100
PCB Aroclor	Total Aroclors	ug/kg			48.7	56
DDD	Total DDD	ug/kg			3.57	4.3
DDE	Total DDE	ug/kg			12.0	15
DDT	Total DDT	ug/kg			6.8	7.7
Chlordanes	Total Chlordane	ug/kg			1.37	1.6
Fishing Zone: 3 to 6, Organism: Brown Bullhead, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	3	4.97	5.1
Metal	Arsenic, total	mg/kg	0	3	0.05	0.06
Metal	Arsenic, inorganic	mg/kg	0	3	0.005	0.006
Metal	Cadmium	mg/kg	0	3	0.014	0.014
Metal	Chromium	mg/kg	0	3	0.773	1.32
Metal	Copper	mg/kg	0	3	0.632	0.711
Metal	Lead	mg/kg	0	3	0.026	0.026
Metal	Manganese	mg/kg	0	3	3.69	4.54
Metal	Mercury	mg/kg	0	3	0.039	0.054
Metal	Nickel	mg/kg	0	3	0.275	0.321
Metal	Thallium	mg/kg	0	3	0.003	0.004
Metal	Zinc	mg/kg	0	3	13.9	14.9
PAH	Fluoranthene	ug/kg	2	3	24.3	40
PAH	Phenanthrene	ug/kg	2	3	31	60
Pesticide	Dieldrin	ug/kg	1	3	1.62	2.6
Pesticide	gamma-Hexachlorocyclohexane	ug/kg	1	3	1.13	1.5
Pesticide	Methoxychlor	ug/kg	2	3	0.7	1.1
Phtalate	Bis(2-ethylhexyl) phthalate	ug/kg	2	3	933	2,700
PCB Aroclor	Total Aroclors	ug/kg			101	125
PCB Congener	Total Congeners	ug/kg			165	236
PCB Congener	Total Dioxin-like Congeners	ug/kg			16.3	27.8
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			149	208
Total Dioxin TEQ		ng/kg			1.51	1.66
Total PCB TEQ		ng/kg			4.96	8.31
Total TEQ		ng/kg			6.47	9.75
DDD	Total DDD	ug/kg			7.77	9
DDE	Total DDE	ug/kg			48	70
DDT	Total DDT	ug/kg			23.2	38
Chlordanes	Total Chlordane	ug/kg			24.9	67

Table 5: Fishing Zone Exposure Point Concentrations for Brown Bullhead

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Endosulfan	Total Endosulfan	ug/kg			3.8	8.6
Fishing Zone: 6 to 9, Organism: Brown Bullhead, Tissue: Fillet						
Metal	Aluminum	mg/kg	0	3	8.21	10.6
Metal	Arsenic, total	mg/kg	0	3	0.02	0.02
Metal	Arsenic, inorganic	mg/kg	0	3	0.002	0.002
Metal	Cadmium	mg/kg	1	3	0.001	0.001
Metal	Copper	mg/kg	0	3	0.253	0.256
Metal	Manganese	mg/kg	0	3	0.12	0.177
Metal	Mercury	mg/kg	0	3	0.076	0.094
Metal	Nickel	mg/kg	0	3	0.013	0.029
Metal	Thallium	mg/kg	0	3	0.001	0.001
Metal	Zinc	mg/kg	0	3	4.87	5.32
PCB Aroclor	Total Aroclors	ug/kg			678	1,336
DDD	Total DDD	ug/kg			5.83	7.35
DDE	Total DDE	ug/kg			15.0	26.5
DDT	Total DDT	ug/kg			7.88	11.5
Chlordanes	Total Chlordane	ug/kg			3.03	5.5
Fishing Zone: 6 to 9, Organism: Brown Bullhead, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	3	14.6	31.7
Metal	Arsenic, total	mg/kg	0	3	0.062	0.08
Metal	Arsenic, inorganic	mg/kg	0	3	0.0062	0.008
Metal	Cadmium	mg/kg	0	3	0.01	0.012
Metal	Chromium	mg/kg	0	3	0.687	1.08
Metal	Copper	mg/kg	0	3	0.747	0.798
Metal	Lead	mg/kg	1	3	0.025	0.044
Metal	Manganese	mg/kg	0	3	6.49	10.8
Metal	Mercury	mg/kg	0	3	0.034	0.046
Metal	Nickel	mg/kg	1	3	0.22	0.261
Metal	Selenium	mg/kg	1	3	0.25	0.3
Metal	Silver	mg/kg	2	3	0.002	0.004
Metal	Thallium	mg/kg	2	3	0.001	0.002
Metal	Zinc	mg/kg	0	3	14.3	15.6
Pesticide	gamma-Hexachlorocyclohexane	ug/kg	2	3	2.9	1.9
PCB Aroclor	Total Aroclors	ug/kg			729	1,719
PCB Congener	Total Congeners	ug/kg			857	1,950
PCB Congener	Total Dioxin-like Congeners	ug/kg			29.4	56.4
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			827	1,894
Total Dioxin TEQ		ng/kg			1.99	2.43
Total PCB TEQ		ng/kg			8.68	16.5
Total TEQ		ng/kg			10.7	18.9
DDD	Total DDD	ug/kg			17	25
DDE	Total DDE	ug/kg			46.8	58
DDT	Total DDT	ug/kg			32.6	58
Chlordanes	Total Chlordane	ug/kg			8.93	15.5

Table 6: Fishing Zone Exposure Point Concentrations for Black Crappie

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Fishing Zone: 3 to 6, Organism: Black Crappie, Tissue: Fillet						
Metal	Aluminum	mg/kg	0	2	6.66	7.03
Metal	Arsenic, total	mg/kg	0	2	0.115	0.13
Metal	Arsenic, inorganic	mg/kg	0	2	0.0115	0.013
Metal	Cadmium	mg/kg	1	2	0.001	0.001
Metal	Chromium	mg/kg	0	2	0.21	0.28
Metal	Copper	mg/kg	0	2	0.175	0.184
Metal	Manganese	mg/kg	0	2	0.155	0.168
Metal	Mercury	mg/kg	0	2	0.077	0.086
Metal	Nickel	mg/kg	0	2	0.061	0.064
Metal	Thallium	mg/kg	0	2	0.006	0.007
Metal	Zinc	mg/kg	0	2	8.24	9.03
PCB Aroclor	Total Aroclors	ug/kg			22.4	22.6
DDD	Total DDD	ug/kg			2.1	2.4
DDE	Total DDE	ug/kg			6	6.5
DDT	Total DDT	ug/kg			1.5	1.5
Chlordanes	Total Chlordane	ug/kg			0.8	1.1
Fishing Zone: 3 to 6, Organism: Black Crappie, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	2	7.12	8.43
Metal	Arsenic, total	mg/kg	0	2	0.203	0.22
Metal	Arsenic, inorganic	mg/kg	0	2	0.0203	0.022
Metal	Cadmium	mg/kg	0	2	0.003	0.004
Metal	Copper	mg/kg	0	2	0.935	0.946
Metal	Lead	mg/kg	1	2	0.01	0.019
Metal	Manganese	mg/kg	0	2	3.16	3.41
Metal	Mercury	mg/kg	0	2	0.035	0.037
Metal	Nickel	mg/kg	0	2	0.334	0.338
Metal	Thallium	mg/kg	0	2	0.007	0.008
Metal	Zinc	mg/kg	0	2	14.9	15.5
Pesticide	Heptachlor	ug/kg	1	2	1.15	1.8
SVOC	Hexachlorobutadiene	ug/kg	0	2	1.35	1.4
PCB Aroclor	Total Aroclors	ug/kg			87.5	90
PCB Congener	Total Congeners	ug/kg			104	106
PCB Congener	Total Dioxin-like Congeners	ug/kg			8.63	8.63
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			95.7	97.1
Total Dioxin TEQ		ng/kg			1.24	1.33
Total PCB TEQ		ng/kg			2.73	2.93
Total TEQ		ng/kg			3.97	4.08
DDD	Total DDD	ug/kg			9.45	11
DDE	Total DDE	ug/kg			37.5	38
DDT	Total DDT	ug/kg			14.2	15
Chlordanes	Total Chlordane	ug/kg			9.05	9.2
Endosulfan	Total Endosulfan	ug/kg			0.8	1.1
Fishing Zone: 6 to 9, Organism: Black Crappie, Tissue: Fillet						
Metal	Aluminum	mg/kg	0	2	3.81	4.57
Metal	Arsenic, total	mg/kg	0	2	0.165	0.18
Metal	Arsenic, inorganic	mg/kg	0	2	0.0165	0.018
Metal	Cadmium	mg/kg	1	2	0.001	0.001
Metal	Copper	mg/kg	0	2	0.181	0.184
Metal	Manganese	mg/kg	0	2	0.106	0.128
Metal	Mercury	mg/kg	0	2	0.096	0.101

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Table 6: Fishing Zone Exposure Point Concentrations for Black Crappie

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Metal	Thallium	mg/kg	0	2	0.008	0.01
Metal	Zinc	mg/kg	0	2	8.22	8.69
PCB Aroclor	Total Aroclors	ug/kg			25.8	32
DDD	Total DDD	ug/kg			2.35	2.7
DDE	Total DDE	ug/kg			7.45	7.8
DDT	Total DDT	ug/kg			3.3	3.4
Fishing Zone: 6 to 9, Organism: Black Crappie, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	2	37.6	68.9
Metal	Arsenic, total	mg/kg	0	2	0.355	0.42
Metal	Arsenic, inorganic	mg/kg	0	2	0.0355	0.042
Metal	Cadmium	mg/kg	0	2	0.005	0.006
Metal	Copper	mg/kg	0	2	0.705	0.721
Metal	Manganese	mg/kg	0	2	3.08	3.36
Metal	Mercury	mg/kg	0	2	0.044	0.044
Metal	Nickel	mg/kg	0	2	0.352	0.357
Metal	Thallium	mg/kg	0	2	0.014	0.017
Metal	Zinc	mg/kg	0	2	16.0	16.8
Pesticide	alpha-Hexachlorocyclohexane	ug/kg	1	2	0.95	1.4
Pesticide	delta-Hexachlorocyclohexane	ug/kg	1	2	2.98	2.3
Pesticide	Dieldrin	ug/kg	1	2	4.75	2.5
SVOC	Hexachlorobenzene	ug/kg	0	2	6.9	8.1
SVOC	Hexachlorobutadiene	ug/kg	1	2	1.4	2.3
PCB Aroclor	Total Aroclors	ug/kg			180	250
PCB Congener	Total Congeners	ug/kg			224	301
PCB Congener	Total Dioxin-like Congeners	ug/kg			15.8	21.0
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			208	280
Total Dioxin TEQ		ng/kg			1.24	1.26
Total PCB TEQ		ng/kg			4.01	5.26
Total TEQ		ng/kg			5.25	6.52
DDD	Total DDD	ug/kg			14.8	18.5
DDE	Total DDE	ug/kg			73.8	80.5
DDT	Total DDT	ug/kg			14.1	21.6
Chlordanes	Total Chlordane	ug/kg			3.95	5.1

Table 7: Site-wide Exposure Point Concentrations for Crayfish

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max	95% UCL	Distribution	95% UCL Method
Organism: Crayfish, Tissue: Whole Body									
Metal	Aluminum	mg/kg	0	27	94.0	203	106	gamma	approximate gamma
Metal	Antimony	mg/kg	11	27	0.008	0.02	0.01	normal	Student's t
Metal	Arsenic, total	mg/kg	0	27	0.353	0.5	0.37	normal	Student's t
Metal	Arsenic, inorganic	mg/kg	0	27	0.0353	0.05	0.037	normal	Student's t
Metal	Cadmium	mg/kg	0	27	0.018	0.036	0.020	normal	Student's t
Metal	Chromium	mg/kg	0	27	0.489	0.9	0.59	gamma	approximate gamma
Metal	Copper	mg/kg	0	27	14.1	17.6	14.8	normal	Student's t
Metal	Lead	mg/kg	0	27	0.153	1.3	0.38	non-parametric	95% Chebyshev (Mean, Sd) UCL
Metal	Manganese	mg/kg	0	27	138	213	151	normal	Student's t
Metal	Mercury	mg/kg	0	27	0.028	0.041	0.030	normal	Student's t
Metal	Nickel	mg/kg	15	27	0.383	0.83	0.45	gamma	approximate gamma
Metal	Silver	mg/kg	4	27	0.029	0.047	0.033	normal	Student's t
Metal	Thallium	mg/kg	0	27	0.003	0.008	0.004	normal	Student's t
Metal	Zinc	mg/kg	0	27	16.7	20.3	17.3	normal	Student's t
PAH	Benz(a)anthracene	ug/kg	26	27	2.01	80	NA	NA	Less than 5 detects
PAH	Chrysene	ug/kg	26	27	2.16	87	NA	NA	Less than 5 detects
PAH	Fluoranthene	ug/kg	24	27	10.2	130	NA	NA	Less than 5 detects
PAH	Phenanthrene	ug/kg	26	27	2.37	97	NA	NA	Less than 5 detects
PAH	Pyrene	ug/kg	25	27	4.02	83	NA	NA	Less than 5 detects
Pesticide	Endrin	ug/kg	22	27	0.342	2.8	2.3	normal	Student's t
Phenol	4-Methylphenol	ug/kg	25	27	9.29	190	NA	NA	Less than 5 detects
Phenol	Pentachlorophenol	ug/kg	26	27	5.42	130	NA	NA	Less than 5 detects
Phenol	Phenol	ug/kg	26	27	21.7	520	NA	NA	Less than 5 detects
PCB Aroclor	Total Aroclors	ug/kg			29.8	280	121	lognormal	H-UCL
PCB Congener	Total Congeners	ug/kg			65.6	207	111	gamma	approximate gamma
PCB Congener	Total Dioxin-like Congeners	ug/kg			6.03	15.1			
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			59.5	193	103	gamma	approximate gamma
Total Dioxin TEQ		ng/kg			3.41	22.7	13.9	non-parametric	95% Chebyshev (Mean, Sd) UCL
Total PCB TEQ		ng/kg			1.92	4.55	3.23	gamma	approximate gamma
Total TEQ		ng/kg			5.33	23.8	15.6	non-parametric	95% Chebyshev (Mean, Sd) UCL
DDD	Total DDD	ug/kg			1.33	21.3	18.7	normal	Student's t

Table 7: Site-wide Exposure Point Concentrations for Crayfish

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max	95% UCL	Distribution	95% UCL Method
DDE	Total DDE	ug/kg			6.78	51	15.5	non-parametric	95% Chebyshev (Mean, Sd) UCL
DDT	Total DDT	ug/kg			4.13	17.5	7.35	gamma	approximate gamma
Chlordanes	Total Chlordane	ug/kg			0.288	1.9	1.7	normal	Student's t
Endosulfan	Total Endosulfan	ug/kg			0.767	3.1	2.0	normal	Student's t

Table 8: Site-wide Exposure Point Concentrations for Smallmouth Bass

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max	95% UCL	Distribution	95% UCL Method
Organism: Smallmouth Bass, Tissue: Fillet									
Metal	Aluminum	mg/kg	0	5	4.09	7.15	5.78	normal	Student's t
Metal	Arsenic, total	mg/kg	0	5	0.21	0.28	0.25	normal	Student's t
Metal	Arsenic, inorganic	mg/kg	0	5	0.021	0.028	0.025	normal	Student's t
Metal	Cadmium	mg/kg	3	5	0	0.001	NA	NA	Less than 5 detects
Metal	Copper	mg/kg	0	5	0.541	1.12	0.97	normal	Student's t
Metal	Lead	mg/kg	4	5	0.002	0.011	NA	NA	Less than 5 detects
Metal	Manganese	mg/kg	0	5	0.084	0.094	0.091	normal	Student's t
Metal	Mercury	mg/kg	0	5	0.095	0.129	0.119	normal	Student's t
Metal	Nickel	mg/kg	0	5	0.073	0.224	0.167	normal	Student's t
Metal	Thallium	mg/kg	0	5	0.004	0.01	NA	non-parametric	Recommended UCL exceeds maximum
Metal	Zinc	mg/kg	0	5	9.11	10.9	10.2	normal	Student's t
Pesticide	beta-Hexachlorocyclohexane	ug/kg	4	5	0.9	4.5	NA	NA	Less than 5 detects
Pesticide	Dieldrin	ug/kg	4	5	1.14	3.3	NA	NA	Less than 5 detects
Pesticide	Endrin aldehyde	ug/kg	3	5	0.7	2	NA	NA	Less than 5 detects
PCB Aroclor	Total Aroclors	ug/kg			62	93	83	normal	Student's t
DDD	Total DDD	ug/kg			3.86	6.4	5.5	normal	Student's t
DDE	Total DDE	ug/kg			16	25	21	normal	Student's t
DDT	Total DDT	ug/kg			10.9	15.2	13.8	normal	Student's t
Chlordanes	Total Chlordane	ug/kg			1.78	4.1	NA	NA	Less than 5 detects
Organism: Smallmouth Bass, Tissue: Whole Body									
Metal	Aluminum	mg/kg	0	14	5.38	11	7.0	normal	Student's t
Metal	Antimony	mg/kg	12	14	0	0.001	NA	NA	Less than 5 detects
Metal	Arsenic, total	mg/kg	0	14	0.272	0.39	0.32	normal	Student's t
Metal	Arsenic, inorganic	mg/kg	0	14	0.0272	0.039	0.032	normal	Student's t
Metal	Cadmium	mg/kg	4	14	0.006	0.024	0.021	gamma	approximate gamma
Metal	Chromium	mg/kg	2	14	0.388	1.14	0.611	normal	Student's t
Metal	Copper	mg/kg	0	14	0.665	1.29	0.868	normal	Student's t
Metal	Lead	mg/kg	0	14	0.028	0.303	0.060	lognormal	95% Chebyshev (MVUE) UCL
Metal	Manganese	mg/kg	0	14	1.26	2.65	1.70	normal	Student's t
Metal	Mercury	mg/kg	0	14	0.087	0.114	0.098	normal	Student's t
Metal	Nickel	mg/kg	7	14	0.064	0.2	0.15	normal	Student's t
Metal	Selenium	mg/kg	11	14	0.073	0.4	NA	NA	Less than 5 detects

Table 8: Site-wide Exposure Point Concentrations for Smallmouth Bass

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max	95% UCL	Distribution	95% UCL Method
Metal	Thallium	mg/kg	0	14	0.004	0.009	0.006	normal	Student's t
Metal	Zinc	mg/kg	0	14	14.9	16.3	7.0	normal	Student's t
PAH	2-Methylnaphthalene	ug/kg	10	14	9.38	59	NA	NA	Less than 5 detects
PAH	Acenaphthene	ug/kg	10	14	13.7	95	NA	NA	Less than 5 detects
PAH	Fluoranthene	ug/kg	13	14	2.77	36	NA	NA	Less than 5 detects
PAH	Fluorene	ug/kg	11	14	9.31	69	NA	NA	Less than 5 detects
PAH	Naphthalene	ug/kg	12	14	6.40	86	NA	NA	Less than 5 detects
PAH	Phenanthrene	ug/kg	12	14	6.10	85	NA	NA	Less than 5 detects
PAH	Pyrene	ug/kg	13	14	2.90	39	NA	NA	Less than 5 detects
Pesticide	Dieldrin	ug/kg	13	14	0.913	7.3	NA	NA	Less than 5 detects
Phthalate	Bis(2-ethylhexyl) phthalate	ug/kg	12	14	4,973	87,000	NA	NA	Less than 5 detects
Phthalate	Di-n-octyl phthalate	ug/kg	11	14	250	2,100	NA	NA	Less than 5 detects
SVOC	Dibenzofuran	ug/kg	12	14	4.73	52	NA	NA	Less than 5 detects
PCB Aroclor	Total Aroclors	ug/kg			914	2,933	1,634	gamma	approximate gamma
PCB Congener	Total Congeners	ug/kg			911	3,025	1,595	gamma	approximate gamma
PCB Congener	Total Dioxin-like Congeners	ug/kg			54.2	84.8			
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			857	2,941	1,528	gamma	approximate gamma
Total Dioxin TEQ		ng/kg			3.36	8.60	5.11	gamma	approximate gamma
Total PCB TEQ		ng/kg			15.2	24.7	19.3	normal	Student's t
Total TEQ		ng/kg			18.5	28.4	22.7	normal	Student's t
DDD	Total DDD	ug/kg			36.9	89.8	55.6	gamma	approximate gamma
DDE	Total DDE	ug/kg			129	177	150	normal	Student's t
DDT	Total DDT	ug/kg			26.6	104	70.4	gamma	approximate gamma
Chlordanes	Total Chlordane	ug/kg			0.542	4.33	NA	NA	Less than 5 detects
Endosulfan	Total Endosulfan	ug/kg			0.975	7.8	NA	NA	Less than 5 detects

Table 9: Site-wide Exposure Point Concentrations for Carp

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max	95% UCL	Distribution	95% UCL Method
Organism: Carp, Tissue: Fillet									
Metal	Aluminum	mg/kg	0	6	1.75	2.68	2.22	normal	Student's t
Metal	Arsenic, total	mg/kg	0	6	0.097	0.16	0.13	normal	Student's t
Metal	Arsenic, inorganic	mg/kg	0	6	0.0097	0.016	0.013	normal	Student's t
Metal	Cadmium	mg/kg	0	6	0.004	0.009	0.006	normal	Student's t
Metal	Chromium	mg/kg	3	6	0.319	1.49	NA	NA	Less than 5 detects
Metal	Copper	mg/kg	0	6	0.401	0.497	0.460	normal	Student's t
Metal	Lead	mg/kg	4	6	0.013	0.057	NA	NA	Less than 5 detects
Metal	Manganese	mg/kg	0	6	0.278	0.379	0.343	normal	Student's t
Metal	Mercury	mg/kg	0	6	0.127	0.191	0.169	normal	Student's t
Metal	Nickel	mg/kg	1	6	0.037	0.087	0.063	normal	Student's t
Metal	Thallium	mg/kg	0	6	0.002	0.003	0.003	normal	Student's t
Metal	Zinc	mg/kg	0	6	23.3	29.8	26.9	normal	Student's t
Pesticide	Methoxychlor	ug/kg	5	6	3.07	7.2	NA	NA	Less than 5 detects
SVOC	Hexachlorobenzene	ug/kg	4	6	25.6	140	NA	NA	Less than 5 detects
PCB Aroclor	Total Aroclors	ug/kg			843	1,295	1,197	normal	Student's t
DDD	Total DDD	ug/kg			45.4	79.5	61.2	normal	Student's t
DDE	Total DDE	ug/kg			94.8	135	112	normal	Student's t
DDT	Total DDT	ug/kg			16	63	57.0	non-parametric	95% Chebyshev (Mean, Sd) UCL
Chlordanes	Total Chlordane	ug/kg			4.2	10	8.1	gamma	Approximate Gamma UCL
Endosulfan	Total Endosulfan	ug/kg			4.17	10	8.07	gamma	Approximate Gamma UCL
Organism: Carp, Tissue: Whole Body									
Metal	Aluminum	mg/kg	0	6	96.8	134	120	normal	Student's t
Metal	Arsenic, total	mg/kg	0	6	0.166	0.22	0.20	normal	Student's t
Metal	Arsenic, inorganic	mg/kg	0	6	0.0166	0.022	0.020	normal	Student's t
Metal	Cadmium	mg/kg	0	6	0.069	0.108	0.086	normal	Student's t
Metal	Chromium	mg/kg	0	6	1.09	2.02	1.58	normal	Student's t
Metal	Copper	mg/kg	0	6	1.16	1.42	1.29	normal	Student's t
Metal	Lead	mg/kg	0	6	0.151	0.202	0.176	normal	Student's t
Metal	Manganese	mg/kg	0	6	6.22	8.53	7.57	normal	Student's t
Metal	Mercury	mg/kg	0	6	0.04	0.047	0.04	normal	Student's t
Metal	Nickel	mg/kg	0	6	0.745	1.37	1.03	normal	Student's t
Metal	Selenium	mg/kg	0	6	0.317	0.4	0.35	non-parametric	Mod-t UCL (Adjusted for skewness)

Table 9: Site-wide Exposure Point Concentrations for Carp

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max	95% UCL	Distribution	95% UCL Method
Metal	Silver	mg/kg	2	6	0.01	0.017	NA	NA	Less than 5 detects
Metal	Thallium	mg/kg	0	6	0.003	0.005	0.004	normal	Student's t
Metal	Zinc	mg/kg	0	6	99.3	112	108	normal	Student's t
PAH	2-Methylnaphthalene	ug/kg	5	6	19.8	38	NA	NA	Less than 5 detects
PAH	Acenaphthene	ug/kg	4	6	34.1	75	NA	NA	Less than 5 detects
PAH	Fluorene	ug/kg	5	6	22.3	53	NA	NA	Less than 5 detects
PAH	Naphthalene	ug/kg	4	6	27.8	56	NA	NA	Less than 5 detects
Pesticide	Methoxychlor	ug/kg	5	6	2.63	4.2	NA	NA	Less than 5 detects
PCB Aroclor	Total Aroclors	ug/kg			1,728	6,865	5,917	gamma	Approximate Gamma UCL
PCB Congener	Total Congeners	ug/kg			1,920	8,154	4,714	lognormal	95% Chebyshev (MVUE) UCL
PCB Congener	Total Dioxin-like Congeners	ug/kg			47.0	150			
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			1,873	8,003	4,617	lognormal	95% Chebyshev (MVUE) UCL
Total Dioxin TEQ		ng/kg			4.79	11.1	7.52	normal	Student's t
Total PCB TEQ		ng/kg			13.2	38.8	35.9	lognormal	H-UCL
Total TEQ		ng/kg			18.0	49.9	36.1	gamma	Approximate Gamma UCL
DDD	Total DDD	ug/kg			68.8	171	130	gamma	Approximate Gamma UCL
DDE	Total DDE	ug/kg			135	260	189	normal	Student's t
DDT	Total DDT	ug/kg			13.3	47	43	lognormal	95% Chebyshev (MVUE) UCL
Chlordanes	Total Chlordane	ug/kg			14.3	25.5	19.7	normal	Student's t
Endosulfan	Total Endosulfan	ug/kg			3.12	10	9.1	gamma	Approximate Gamma UCL

Table 10: Site-wide Exposure Point Concentrations for Brown Bullhead

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max	95% UCL	Distribution	95% UCL Method
Organism: Brown Bullhead, Tissue: Fillet									
Metal	Aluminum	mg/kg	0	6	5.46	10.6	8.26	normal	Student's t
Metal	Arsenic, total	mg/kg	0	6	0.02	0.02	NA	constant	NA
Metal	Arsenic, inorganic	mg/kg	0	6	0.002	0.002	NA	constant	NA
Metal	Cadmium	mg/kg	1	6	0.001	0.001	NA	constant	NA
Metal	Chromium	mg/kg	3	6	0.073	0.23	NA	NA	Less than 5 detects
Metal	Copper	mg/kg	0	6	0.251	0.292	0.274	normal	Student's t
Metal	Manganese	mg/kg	0	6	0.109	0.177	0.141	gamma	approximate gamma
Metal	Mercury	mg/kg	0	6	0.061	0.094	0.078	normal	Student's t
Metal	Nickel	mg/kg	0	6	0.021	0.055	0.036	normal	Student's t
Metal	Thallium	mg/kg	0	6	0.002	0.003	NA	gamma	Recommended UCL exceeds maximum
Metal	Zinc	mg/kg	0	6	5.23	6.49	5.92	normal	Student's t
PAH	Fluoranthene	ug/kg	5	6	43.8	110	NA	NA	Less than 5 detects
PAH	Phenanthrene	ug/kg	4	6	57.9	140	NA	NA	Less than 5 detects
Pesticide	Dieldrin	ug/kg	5	6	2.1	2.1	NA	NA	Less than 5 detects
Phthalate	Bis(2-ethylhexyl) phthalate	ug/kg	5	6	68.3	100	NA	NA	Less than 5 detects
PCB Aroclor	Total Aroclors	ug/kg			363	1,336	1,129	lognormal	95% Chebyshev (MVUE) UCL
DDD	Total DDD	ug/kg			4.7	7.35	7.11	gamma	approximate gamma
DDE	Total DDE	ug/kg			13.5	26.5	19.2	normal	Student's t
DDT	Total DDT	ug/kg			7.34	11.5	9.15	normal	Student's t
Chlordanes	Total Chlordane	ug/kg			2.2	5.5	4.0	gamma	approximate gamma
Organism: Brown Bullhead, Tissue: Whole Body									
Metal	Aluminum	mg/kg	0	6	9.8	31.7	29.0	non-parametric	95% Chebyshev (Mean, Sd) UCL
Metal	Arsenic, total	mg/kg	0	6	0.056	0.08	0.07	normal	Student's t
Metal	Arsenic, inorganic	mg/kg	0	6	0.0056	0.008	0.007	normal	Student's t
Metal	Cadmium	mg/kg	0	6	0.012	0.014	0.014	normal	Student's t
Metal	Chromium	mg/kg	0	6	0.73	1.32	1.04	normal	Student's t
Metal	Copper	mg/kg	0	6	0.69	0.798	0.762	normal	Student's t
Metal	Lead	mg/kg	1	6	0.025	0.044	0.035	normal	Student's t
Metal	Manganese	mg/kg	0	6	5.09	10.8	8.2	gamma	approximate gamma
Metal	Mercury	mg/kg	0	6	0.037	0.054	0.046	normal	Student's t
Metal	Nickel	mg/kg	1	6	0.248	0.321	0.294	normal	Student's t
Metal	Selenium	mg/kg	4	6	0.175	0.3	NA	NA	Less than 5 detects

Table 10: Site-wide Exposure Point Concentrations for Brown Bullhead

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max	95% UCL	Distribution	95% UCL Method
Metal	Silver	mg/kg	5	6	0.002	0.004	NA	NA	Less than 5 detects
Metal	Thallium	mg/kg	2	6	0.002	0.004	NA	NA	Less than 5 detects
Metal	Zinc	mg/kg	0	6	14.1	15.6	15.0	normal	Student's t
PAH	Fluoranthene	ug/kg	5	6	20.4	40	NA	NA	Less than 5 detects
PAH	Phenanthrene	ug/kg	5	6	23.8	60	NA	NA	Less than 5 detects
Pesticide	Dieldrin	ug/kg	4	6	2.48	2.6	NA	NA	Less than 5 detects
Pesticide	gamma-Hexachlorocyclohexane	ug/kg	3	6	2.02	1.9	NA	NA	Less than 5 detects
Pesticide	Methoxychlor	ug/kg	5	6	1.18	1.1	NA	NA	Less than 5 detects
Phthalate	Bis(2-ethylhexyl) phthalate	ug/kg	5	6	491	2,700	NA	NA	Less than 5 detects
PCB Aroclor	Total Aroclors	ug/kg			415	1,719	1,438	gamma	approximate gamma
PCB Congener	Total Congeners	ug/kg			511	1,950	1,558	gamma	approximate gamma
PCB Congener	Total Dioxin-like Congeners	ug/kg			22.8	56.4			
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			488	1,894	1,523	gamma	approximate gamma
Total Dioxin TEQ		ng/kg			1.75	2.43	2.06	normal	Student's t
Total PCB TEQ		ng/kg			6.82	16.5	11.1	normal	Student's t
Total TEQ		ng/kg			8.57	18.9	13.1	normal	Student's t
DDD	Total DDD	ug/kg			12.9	25	18	normal	Student's t
DDE	Total DDE	ug/kg			47.4	70	60	normal	Student's t
DDT	Total DDT	ug/kg			27.9	58	44	normal	Student's t
Chlordanes	Total Chlordane	ug/kg			18.0	67	58	gamma	approximate gamma
Endosulfan	Total Endosulfan	ug/kg			3.9	8.6	6.6	normal	Student's t

Table 11: Site-wide Exposure Point Concentrations for Black Crappie

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Organism: Black Crappie, Tissue: Fillet						
Metal	Aluminum	mg/kg	0	4	5.23	7.03
Metal	Arsenic, total	mg/kg	0	4	0.14	0.18
Metal	Arsenic, inorganic	mg/kg	0	4	0.014	0.018
Metal	Cadmium	mg/kg	2	4	0.001	0.001
Metal	Chromium	mg/kg	2	4	0.12	0.28
Metal	Copper	mg/kg	0	4	0.178	0.184
Metal	Manganese	mg/kg	0	4	0.13	0.168
Metal	Mercury	mg/kg	0	4	0.086	0.101
Metal	Nickel	mg/kg	2	4	0.031	0.064
Metal	Thallium	mg/kg	0	4	0.007	0.01
Metal	Zinc	mg/kg	0	4	8.23	9.03
PCB Aroclor	Total Aroclor	ug/kg			24.1	32
DDD	Total DDD	ug/kg			2.23	2.7
DDE	Total DDE	ug/kg			6.73	7.8
DDT	Total DDT	ug/kg			2.65	3.4
Chlordanes	Total Chlordane	ug/kg			0.65	1.1
Organism: Black Crappie, Tissue: Whole Body						
Metal	Aluminum	mg/kg	0	4	22.4	68.9
Metal	Arsenic, total	mg/kg	0	4	0.279	0.42
Metal	Arsenic, inorganic	mg/kg	0	4	0.0279	0.042
Metal	Cadmium	mg/kg	0	4	0.004	0.006
Metal	Copper	mg/kg	0	4	0.82	0.946
Metal	Lead	mg/kg	3	4	0.007	0.019
Metal	Manganese	mg/kg	0	4	3.12	3.41
Metal	Mercury	mg/kg	0	4	0.039	0.044
Metal	Nickel	mg/kg	0	4	0.343	0.357
Metal	Thallium	mg/kg	0	4	0.011	0.017
Metal	Zinc	mg/kg	0	4	15.4	16.8

Table 11: Site-wide Exposure Point Concentrations for Black Crappie

Chemical Group	Chemical	Unit	Non-Detects	Total Samples	Arithmetic Mean	Max
Pesticide	alpha-Hexachlorocyclohexane	ug/kg	3	4	0.725	1.4
Pesticide	delta-Hexachlorocyclohexane	ug/kg	3	4	1.74	2.3
Pesticide	Dieldrin	ug/kg	3	4	2.84	2.5
Pesticide	Heptachlor	ug/kg	3	4	0.863	1.8
SVOC	Hexachlorobenzene	ug/kg	2	4	3.71	8.1
SVOC	Hexachlorobutadiene	ug/kg	1	4	1.38	2.3
PCB Aroclor	Total Aroclors	ug/kg			134	250
PCB Congener	Total Congeners	ug/kg			164	301
PCB Congener	Total Dioxin-like Congeners	ug/kg			12.2	21.0
PCB Congener	Total Congeners Without Dioxin-like PCBs	ug/kg			152	280
Total Dioxin TEQ		ng/kg			1.24	1.33
Total PCB TEQ		ng/kg			3.37	5.26
Total TEQ		ng/kg			4.61	6.52
DDD	Total DDD	ug/kg			12.1	18.5
DDE	Total DDE	ug/kg			55.6	80.5
DDT	Total DDT	ug/kg			14.1	21.6
Chlordanes	Total Chlordane	ug/kg			7.5	9.7
Endosulfan	Total Endosulfan	ug/kg			2.03	6

LOWER WILLAMETTE GROUP

Portland Harbor RI/FS
Round 1 Site Characterization Summary Report

APPENDIX D

SCRA DATABASE
EXCEL XTAB FILE FORMAT

(Provided on Accompanying CD)

October 12, 2004

DRAFT DOCUMENT: DO NOT QUOTE OR CITE This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

Prepared for:
The Lower Willamette Group

Prepared by:
Integral Consulting, Inc.

LWG
LOWER WILLAMETTE GROUP

Portland Harbor RI/FS
Round 1 Site Characterization Report

APPENDIX E
DATA QUALITY

October 12, 2004

DRAFT DOCUMENT: DO NOT QUOTE OR CITE
This document is currently under review by US EPA and its federal, state, and tribal partners, and is subject to change in whole or in part.

Prepared for:
The Lower Willamette Group

Prepared by:
Integral Consulting, Inc.

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LIST OF ACRONYMS

ACG	analytical concentration goals
ARI	Analytical Resources, Inc.
Axys	Axys Analytical Services
CAS	Columbia Analytical Services
CLP	Contract Laboratory Program
DQO	data quality objective
EPA	U.S. Environmental Protection Agency
ERA	ecological risk assessment
FSP	field sampling plan
GC/ECD	gas chromatography/electron capture detector
GC/FPD	gas chromatography/flame photometric detection
GC/LRMS	gas chromatography/low resolution mass spectrometry
GC/MS	gas chromatography/mass spectrometry
GFAA	graphite furnace atomic absorption
HHRA	human health risk assessment
HRGC/HRMS	high resolution gas chromatography/high resolution mass spectrometry
ICP	inductively coupled plasma
ICP-AES	Inductively coupled plasma – atomic emission spectrometry
ICP/MS	inductively coupled plasma/mass spectrometry
ISA	initial study area
LDC	laboratory Data Consultants
LCS/LCSD	laboratory control sample/laboratory control sample duplicate
LWG	Lower Willamette Group
µg/L	micrograms per liter
µg/kg	micrograms per kilogram
MDL	method detection limit
mg/kg	milligrams per kilogram
mg/L	milligrams per liter
MRL	method reporting limit
MS	Matrix Spike
MSD	matrix spike duplicate
NEA	Northeast Analytical
OPR	ongoing precision and recovery
PAH	polycyclic aromatic hydrocarbon
PARCC	precision, accuracy, representativeness, completeness, and comparability
PCB	polychlorinated biphenyl
PCDD/F	polychlorinated dibenzo-p-dioxins and furans
PCP	pentachlorophenol
PSEP	Puget Sound Estuary Program
QA/QC	quality assurance/quality control
QAPP	quality assurance project plan
RDL	reported detection limit
REGL	Rosa Environmental and Geotechnical Laboratory
RI/FS	remedial investigation/feasibility study

RM	river mile
RPD	relative percent difference
RSD	relative standard deviation
SIM	selected ion monitoring
SOP	standard operating procedure
SVOC	semivolatile organic compound
TIC	tentatively identified compound
TOC	total organic carbon
VOC	volatile organic compound

INTRODUCTION

This report summarizes the data quality of sediment and tissue samples collected during Round 1 of the Portland Harbor Remedial Investigation and Feasibility Study (RI/FS). Sediment and tissue samples were collected and analyzed for organic, inorganic, and physical and conventional parameters according to the sample preparation and analytical procedures in the project quality assurance project plan (QAPP) (SEA 2002).

The laboratory methods of analysis for the sediment samples are included in Table E-1. All sediment samples were analyzed for metals, organochlorine pesticides, PCB Aroclors, chlorinated herbicides, semivolatile organic compounds (SVOCs), total organic carbon, grain size, and total solids. Selected sediment samples were analyzed for PCB congeners, polychlorinated dibenzo-p-dioxins and furans (PCDD/Fs), butyltins, and volatile organic compounds (VOCs) as required by the field sampling plan (FSP). The sediment analyses were conducted by Analytical Resources Inc. (ARI), Tukwila, Washington; Rosa Environmental & Geotechnical Laboratory (REGL), Seattle, Washington (subsequently acquired by ARI), and Axys Analytical Services, Ltd. (Axys), of Sidney, British Columbia, as indicated on Table E-1.

Tissue samples were resected at the field laboratory and were composited and homogenized by Axys. The samples were analyzed for organic, inorganic, and conventional parameters according to the methods listed in Table E-2. Axys retained an aliquot of homogenized tissue for analyses of dioxin/furans and PCB congeners on whole body and fish fillet for human health risk assessment (HHRA) species only. Aliquots or the homogenized tissue samples were sent to ARI and Columbia Analytical Services (CAS), Kelso, Washington for chemical analysis. All tissue samples were analyzed for organochlorine pesticides, PCB Aroclors, metals, lipids, and total solids, as specified in the FSP. Selected tissue samples were analyzed for SVOCs, PCB congeners, PCDD/Fs, and butyltins. Axys, ARI, and CAS all performed chemical analyses for the tissue samples, as indicated on Table E-2.

The sample analyses were conducted according to the QAPP (SEA 2002) with deviations from the QAPP as noted in Section 3.2.3 of the main body of this report.

DATA QUALITY AND USABILITY

Data generated in the field and at the laboratories were verified and validated according to the criteria and procedures described in the Round 1 QAPP (SEA 2002). Data quality and usability were evaluated based on the results of the data validation and the data quality objectives (DQOs) for the Round 1 data. The performance criteria in the QAPP included project analytical goals for precision, accuracy, representativeness, completeness, and comparability (PARCC) of the Round 1 data.

The precision, accuracy, representativeness, and comparability of the data were assessed during data validation, as described in the *Data Validation* section, below. A project completeness goal for analytical data of 90 percent was established in the QAPP. Completeness is calculated by comparing the total number of acceptable data (non-rejected data) to the total number of data points generated. Completeness for the Round 1 tissue and sediment chemistry data was 98 percent. Completeness for the Round 1 data is summarized by parameter group and matrix in Table E-3. The completeness goal of 90 percent was met or exceeded for all parameter groups except butyltins in sediment, with completeness of 87 percent (4 of 30 analytical results rejected).

DATA VALIDATION

Data validation was conducted as required by the QAPP (SEA 2002) and is summarized in Section 3.4 of the main body of this report. The inorganic, organic, and dioxin/furan data were validated in general accordance with guidance specified by the U.S. EPA Contract Laboratory Program National Functional Guidelines for Inorganic, Organic, or Chlorinated Dioxin/Furan Data Review (EPA 1994a, 1999a, 2002), respectively. Modifications were made to the Functional Guidelines to accommodate QA/QC requirements of the non-Contract Laboratory Program (CLP) methods that were used for this project. The following laboratory deliverables were reviewed during Level 3 and full data validation:

- The case narrative discussing analytical problems (if any) and procedures
- Chain-of-custody documentation
- Instrument calibration results
- Method blank results
- Results for laboratory quality control samples required by the referenced method including laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses, matrix spike/matrix spike duplicate (MS/MSD) analyses, surrogate recoveries, and other method specific quality control samples (e.g. serial dilutions for ICP analyses)
- Results for field quality control samples
- Analytical results for analyses performed.

For data packages subjected to full validation, in addition to review and assessment of the documentation identified above, the validation includes verification of reported concentrations of the results for field samples and QC samples, and verification of intermediate transcriptions.

Data qualifiers were assigned during data validation if applicable control limits were not met, in accordance with the U.S. EPA data validation guidelines (EPA 1994a, 1999a, 2002) and the quality control requirements included in the referenced methods. The quality control limits for surrogate spikes, matrix spike/matrix spike duplicates samples, laboratory control samples, and ongoing precision and recovery for the Round 1 laboratories are summarized in Tables E-4 through E-7. The data validation qualifiers and definitions are summarized in Table E-8. Data quality reports and a tabular summary of qualified data generated by Laboratory Data Consultants (LDC) are included in Attachment 1.

DATA QUALITY

The LDC data validation reports (Attachment 1) provide detailed information on the data quality issues and data validation qualifiers for each parameter group for each laboratory data package. A summary of the qualified data by parameter group with the reasons for qualification is included in Table E-9. The Round 1 qualified data are included in Tables E-10 through E-25. The discussion below includes a comparison of the detection limits to the analyte concentration goals (ACGs) specified in the QAPP (SEA 2002), followed by a summary of the qualified data for each parameter group and any limitations to the usability of the data.

Analytical Concentration Goals and Reported Detection Limits

Data for Round 1 of the Portland Harbor RI/FS were reported to the method detection limit in most cases. Data for pesticides in fish tissue were reported to the method reporting limit because the presence of PCBs and other matrix interferences generally precluded reliable detection or identification of pesticides below the method reporting limit (MRL) (see PCB Aroclor discussion below). Reporting limits for PCB Aroclors in sediment and fish tissue were elevated by the laboratories when PCB peaks that could be attributed to more than one Aroclor were present. Sample-specific detection limits were reported for PCB congeners and PCDD/Fs, as specified in the respective method protocols (EPA methods 1668A and 1613B; EPA 1999b and 1994b). These detection limits are based on the signal-to-noise ratio of the analytical system for each analyte and sample. In several cases, particularly for pesticides and PCBs, the method detection limit (MDL) and MRL were elevated at the laboratory or during data validation because matrix interference or the presence of another analyte interfered with the quantification of a given analyte. MDLs and MRLs were also elevated when results were restated as undetected during data validation because of possible sample contamination, as indicated by the presence of target analytes in a method blank or equipment blank. The reported detection limit (RDL) is the collective term for the detection limit or reporting limit used to quantify non-detects, as applicable to each sample and analyte.

Tables E-26 and E-27 provide the minimum and maximum RDL attained for the Round 1 sediment and tissue samples for each analyte and the ACGs and MRLs provided in the Round 1 QAPP (SEA 2002). Notes are provided to identify analytes with RDLs that were greater than the ACG as follows:

- ***Note a:*** The MRL provided in the Round 1 QAPP is higher than the ACG, and the analyte was not detected in one or more samples. The RDL for these analytes was expected to be greater than the ACG. The ACG is not relevant to analytes that were detected in all of the samples.
- ***Note b:*** The lowest RDL is greater than the ACG. The RDL for non-detects is always higher than the ACG. This outcome was expected when the MRL provided in the QAPP was greater than the ACG (i.e., notes *a* and *b* are both included for analytes for which the RDL did not, and was not expected to, meet the ACG).
- ***Note c:*** The lowest RDL is less than the ACG and the highest RDL is greater than the ACG. That is, the ACG is between the lowest and highest RDL. Note *a* is included when the MRL (and RDL) was not expected to meet the ACG.

For most analytes in both sediment and tissue samples, the RDLs were above the ACG when this was anticipated in the Round 1 QAPP. For several analytes for both sample types, the MRL provided in the QAPP was above the ACG, but the RDL attained by the laboratory was lower than the ACG. These analytes are noted *a* if the RDL for non-detects was below the ACG for all samples (i.e., the MRL provided in the QAPP was above the ACG, but the maximum RDL attained by the lab was below the ACG), or *a, c* if the RDL was below the ACG for some, but not all samples (i.e., the MRL provided in the QAPP was above the ACG, but the RDL attained by the lab was below the ACG for a portion of the samples).

Analytes for which the MRL provided in the QAPP (Tables A7-4 and A7-5 of SEA 2002 and Tables E-26 and E-27 of this report) was above the ACG are noted with an *a*. The MRL was expected to be below the ACG (when available) for analytes without this notation. The RDLs for non-detects were expected to be below the ACG but were actually above the ACG for several analytes in sediment and tissue samples, as follows:

Sediment	Tissue
alpha-Endosulfan	4,4'-DDD
1,2-Dichlorobenzene	4,4'-DDE
Hexachlorobenzene	4,4'-DDT
Hexachlorobutadiene	Endrin
Dibenzofuran	Mirex
4-Methylphenol	1,4-Dichlorobenzene
2-Chlorophenol	Hexachloroethane
2,4,5-Trichlorophenol	Hexachlorobutadiene
2,3,4,5-Tetrachlorophenol	Carbazole

Sediment	Tissue
2,3,4,6-Tetrachlorophenol	Dibenzofuran
2,3,5,6-Tetrachlorophenol	Butylbenzyl phthalate
Dibutyl phthalate	Di-n-octyl phthalate
Di-n-octyl phthalate	Naphthalene
Naphthalene	Chrysene
Acenaphthene	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin
Fluorene	1,2,3,4,7,8-Hexachlorodibenzofuran
2,4,5-T	1,2,3,6,7,8-Hexachlorodibenzofuran
Silvex	
1,2,3,7,8,9-Hexachlorodibenzofuran	

RDLs for pesticides were elevated when PCBs or other matrix interferences prevented quantitation to the method detection or method reporting limits. RDLs for SVOCs were elevated when samples required dilution because of high levels of analytes or matrix interferences. For PCB congeners and chlorinated dioxins and furans, the method detection limits were provided in the QAPP rather than the method reporting limits. The sample-specific detection limits were generally higher these method detection limits.

Field Quality Control Samples

Field quality control samples are used to assess sample variability (e.g., duplicates and replicates), evaluate potential sources of contamination (e.g., equipment rinsate blanks), or confirm proper storage conditions (e.g., temperature blanks). The Round 1 QAPP (SEA 2002) required collection of the following field quality control samples:

- Temperature Blanks – 1 per cooler
- Trip Blanks – 1 per cooler for VOCs
- Field Duplicates – 10 percent frequency for sediments
- Field Replicates – 10 percent frequency for sediments
- Equipment Rinsate Blanks – 5 percent frequency for sediments and tissue
- Tissue Duplicate and Triplicate Samples – For the ecological risk assessment, duplicate tissues collected at 10 percent frequency. For the human health risk assessment, triplicate samples were collected at all locations.

The field quality control samples were collected at the frequency specified in the QAPP, with the exception of equipment rinsate blanks. Equipment rinsate blanks were collected at the specified frequency for sediments. Selected target analytes were detected at low levels in the sediment equipment rinsate blanks. No data were restated as undetected on the basis of detection of target analytes in the equipment rinsate blanks. Equipment rinsate blanks were not collected for the tissue sample collection because the fishing gear the fishing gear was rinsed with surface water prior to implementation and equipment rinsate blanks would have contained analytes present in the surface water.

Field replicate samples were generated for tissue samples by collecting additional fish in the field and generating two or three composite samples for each replicate station. The composite samples were generated by homogenizing up to five individual fish (or about 350 grams for crayfish and sculpin samples) for each composite sample. Because the field replicate samples for tissue were generated by compositing separate individual fish, the fish field replicate samples were treated as separate analytical samples. For the tissue samples, the replicate composite samples were collected at the frequency required by the QAPP.

For sediment samples, the QAPP required collection of field duplicates and field replicates at a frequency of 10 percent. Field duplicates and replicates were collected to assess the variability of the results. Field duplicate samples were collected by taking an additional aliquot of the sediment after compositing. Field replicates were collected by collecting two additional sediment samples at a sediment station, processing these samples consistent with the procedure for the natural samples, and submitting these two replicates as separate analytical samples for anlaysis at the laboratory. The field duplicate and replicate sample results for sediment samples are summarized in Tables 28a - e.

The comparability of the duplicate and replicate results was assessed by calculating the relative percent difference (RPD) and relative standard deviation (RSD) of the results. A control limit of 50 RPD is recommended by the Puget Sound Estuary Program (PSEP) and the Puget Sound Ambient Monitoring Program (PSEP 1997, Appendix C) for analytical precision for organic analyses. Because there is no standard control limit for comparison of field duplicate and replicate results, an RPD of 50 was established as a conservative target control limit for detected results greater than 5 times the reporting limit. Greater variability is expected for results within 5-10 times the reporting limit because of the increased variability of results near the reporting limit. The selected individual results that exceeded the target control limit of 50 were likely affected by sample heterogeneity between laboratory subsamples. The precision of the results is acceptable. No sediment data were qualified based solely on the duplicate or replicate results.

Conventionals

Conventional analyses were conducted for Round 1 sediment and tissue samples. Total solids, total organic carbon (TOC), and grain-size analyses were conducted for sediment samples. Total solids and lipids analyses were conducted for tissue samples. None of the conventional data were qualified as estimated or rejected during data validation. The conventional data are usable for all intended purposes.

Metals

A total of 73 sediment samples and 129 tissue samples were analyzed for metals, as summarized on Tables E-1 and E-2. For the sediment samples, selected results were restated as undetected (assigned a U qualifier) because of the detection of target compounds in the associated laboratory blanks. Selected results were also qualified as estimated (assigned a J qualifier) because of exceedance of the laboratory control limits for matrix spikes, matrix spike duplicates, or exceedance of the graphite furnace atomic absorption (GFAA) instrument quality control limits for selenium analyses. Six percent of the metals data (i.e., all 50 non-detects for antimony in sediment) were rejected due to low matrix spike recovery results.

The precision and accuracy of the metals data was acceptable, with the exception of the sediment data (6 percent) which were rejected during data validation. The completeness of the metals data was 94 percent for sediment samples and 100 percent for tissue samples. The summary of qualified data for metals is included in Tables E-11 and E-20. The Round 1 metals data, excluding the rejected sediment data, met the project DQOs and are usable for all project purposes.

Butyltins

A total of six sediment samples and two tissue samples were analyzed for butyltins, as summarized on Tables E-1 and E-2. For the sediment samples, 27 percent of the butyltin results were qualified as estimated (assigned a J qualifier) because of exceedance of the control limits for instrument calibration. Thirteen percent (4 results) of the sediment results for butyltins were rejected due to exceedance of the control limits for instrument calibration. None of the tissue results for butyltins were qualified as estimated or rejected.

The precision and accuracy of the butyltin data were acceptable, with the exception of the sediment data (13 percent) which were rejected during data validation. The completeness of the butyltin data was 87 percent for sediment samples and 100 percent for tissue samples. The summary of qualified data for butyltins in sediment samples is included in Table E-12. The Round 1 butyltin data, excluding the rejected sediment data, met the project DQOs and are usable for all project purposes.

Volatile Organic Compounds

One sediment sample was analyzed for VOCs for the Round 1 sampling event. Of the 76 VOCs target analytes, only acetone was detected. The result for acetone was qualified as estimated because the LCS results exceeded control limits. The remaining 75 analytes were undetected at an estimated detection limit (assigned a UJ qualifier) because of holding time, system monitoring compound, and instrument calibration exceedances. The completeness of the VOC data was 100 percent. The VOC data are tabulated on Table E-13. The Round 1 VOC data met the project DQOs and are usable for all project purposes.

Semivolatile Organic Compounds

A total of 73 sediment samples and 100 tissue samples were analyzed for SVOCs, as summarized on Tables E-1 and E-2. For the sediment samples, less than 1 percent of the results were restated as undetected (assigned a U qualifier) because of the detection of target compounds in the associated laboratory blanks. Five percent of the sediment results were qualified as undetected at an estimated detection limit (assigned a UJ qualifier) because of exceedances of the holding time or instrument calibration control limits. Five percent of the sediment results were qualified as estimated (assigned a J qualifier) because of exceedances of the laboratory control limits for surrogate samples, internal standards, or instrument calibration. Eight percent of the sediment sample results were rejected due to exceedances of laboratory control limits for instrument calibration, surrogate samples, and internal standards. For the tissue samples, 1 percent were restated as undetected (assigned a U qualifier) because of detection of target analytes in the associated laboratory blanks. Four percent of the tissue results were qualified as undetected at an estimated detection limit (assigned a UJ qualifier) because of exceedances of the holding time and instrument calibration control limits. Less than one percent of the tissue results were qualified as estimated (assigned a J qualifier) because of exceedances of the laboratory control limits for surrogate samples or instrument calibration. Less than one percent of the tissue sample results were rejected due to exceedances of laboratory control limits for LCS results.

The precision and accuracy of the SVOC data was acceptable, with the exception of the sediment data (8 percent) and tissue data (less than 1 percent) which were rejected during data validation. The completeness of the SVOC data was 92 percent for sediment samples and 99.6 percent for tissue samples. The summary of qualified data for SVOCs is included in Tables E-14 and E-21. The Round 1 SVOC data, excluding the rejected data, met the project DQOs and are usable for all project purposes.

PCB Aroclors

A total of 73 sediment samples and 129 tissue samples were analyzed for organochlorine pesticides, as summarized on Tables E-1 and E-2. For the sediment samples, 12 percent of the results were qualified as estimated (assigned a J qualifier) because of exceedance of the laboratory control limits for surrogate compounds. For the tissue samples, 10 percent of the results were qualified as undetected at an estimated detection limit (assigned a UJ qualifier) because of exceedances of laboratory control limits for instrument calibration. Five percent of the tissue data were qualified as estimated (assigned a J qualifier) because of exceedances of laboratory control limits for instrument calibration or second column confirmation criteria. None of the PCB Aroclor data for sediment or tissues samples were rejected during validation.

During data review, a question about the identification of individual Aroclors in sediment and tissue samples arose. Review of chromatograms for a subset of the sediment and tissue samples was conducted to evaluate the PCB Aroclor identification performed by both laboratories. The difference in identification of PCB Aroclors in fish tissue and sediment samples appears to be an artifact of the method used to identify the Aroclors in fish tissue samples. Differential rates of weathering and metabolism of PCB congeners change the composition and obscure the chromatographic patterns of the Aroclors. The assignment of Aroclor identifications to the fish tissue samples may not reflect the Aroclors from which the individual PCB congeners originated because of the considerable spectral overlap between the Aroclors and the effects of weathering and metabolism on the Aroclors.

This Aroclor identification issue was discussed with EPA during several meetings and the Lower Willamette Group (LWG) and EPA project teams agreed to report the individual PCB Aroclors in the database as they were identified and reported by the laboratories. The precision and accuracy of the PCB Aroclor data was acceptable. No PCB Aroclor data were rejected. The completeness of the PCB Aroclor data was 100 percent for Round 1 sediment and tissue samples. The summary of qualified data for PCB Aroclors is included in Tables E-17 and E-23. The Round 1 PCB Aroclor data met the project DQOs and are usable for all project purposes, with consideration to the difficulties inherent in the identification of the Aroclors in fish tissue described in the previous paragraph.

Organochlorine Pesticides

A total of 73 sediment samples and 129 tissue samples were analyzed for organochlorine pesticides, as summarized on Tables E-1 and E-2. When reviewing the chromatograms for the pesticide analysis, LWG and EPA project chemists noted evidence of potential interference in the pesticide analysis from the presence of PCBs in selected samples. EPA requested reanalysis of selected Round 1 tissue samples because of possible false positive or biased high pesticide results due to the potential interference of PCBs in the pesticide analysis. Additional review of the gas chromatograph/electron capture detector (GC/ECD) chromatograms for pesticides was conducted by LWG to assess the degree of PCB interference for the pesticide analysis. Reanalysis of 56 tissue samples was conducted by gas chromatography/mass spectrometry (GC/MS) using a mass spectrometer equipped with an ion trap (EPA Method 8270C), which increased the sensitivity of the instrument. The data validation process and qualifiers assigned to the pesticide data are summarized in a technical memorandum (Attachment 2). The decision process used for selection of organochlorine pesticide results to report is summarized on pages 6 and 7 of the technical memorandum (Attachment 2).

For the sediment samples, 4 percent of the pesticide results were qualified as undetected at an estimated detection limit (assigned a UJ qualifier) because of exceedances of laboratory control limits for instrument calibration. Less than one percent of the tissue data were qualified as estimated (assigned a J qualifier) because of exceedances of laboratory control limits for instrument calibration, or problems with compound quantitaion. Six percent of the pesticide data for sediment samples were rejected during validation because of exceedances of laboratory control limits for instrument calibration, surrogate compound recoveries, or chromatographic interference.

For the tissue samples, 5 percent of the pesticide results were restated as undetected (assigned a U qualifier) due to analyte identification issues resulting from matrix interferences or the presence of PCBs in the samples. Nine perecent of the tissue results were qualified as undetected at an estimated detection limit (assigned a UJ qualifier) because of analyte identification issues, or exceedance of the laboratory control limits for instrument calibration or the laboratory control sample. Four percent of the tissue results were qualified as estimated (assigned a J qualifier) because of analyte identification issues, or exceedance of the laboratory control limits for instrument calibration, surrogate compound recoveries, or the laboratory control sample. Ten percent of the tissue results were qualified as estimated (assigned an N or NJ qualifier) because of analyte identification issues. Less than one percent of the tissue data were rejected because of analyte identification issues or replicate precision.

After completion of the reanalyses of selected tissue samples by GC/MS ion trap, the precision and accuracy of the organochlorine pesticide data was acceptable, with the exception of the rejected sediment and tissue data. The completeness of the pesticide data was 94 percent for sediment samples and 99.9 percent for tissue samples, for the final tissue data set including GC/MS ion trap reanalysis. The summary of qualified pesticide data is included in Tables E-16 and E-22. The Round 1 organochlorine pesticide data, excluding the rejected data, met the project DQOs and are usable for all project purposes.

PCB Congeners

A total of 12 sediment samples and 49 tissue samples were analyzed for PCB congeners, as summarized on Tables E-1 and E-2. For the sediment samples, less than 1 percent of the results were qualified as undetected at an estimated detection limit (assigned a UJ qualifier) because of chromatographic interference. Twenty percent of the sediment data were qualified as estimated because of the coelution of PCB congeners in the samples. For the tissue samples, less than 1 percent of the results were qualified as undetected at and estimated detection limit (assigned a UJ qualifier) because of exceedances of control limits for the internal standard. Twenty-one percent of the tissue data were qualified as estimated (assigned a J qualifier) because of exceedances of control limits for internal standards, or because of problems with compound quantitation or the presence of coelutions for specific congeners. Less than 1 percent of the tissue data were qualified as estimated and tentatively identified (assigned an NJ qualifier) because of compound quantitation or congener coelution issues. None of the PCB congener data for sediment or tissues samples were rejected during validation.

The precision and accuracy of the PCB congener data was acceptable. The completeness of the PCB congener data was 100 percent for Round 1 sediment and tissue samples. The summary of qualified data for PCB congeners is included in Tables E-18 and E-24. The Round 1 PCB congener data met the project DQOs and are usable for all project purposes

Chlorinated Dioxins and Furans

A total of 12 sediment samples and 49 tissue samples were analyzed for PCDD/Fs, as summarized on Tables E-1 and E-2. For the sediment samples, 1 percent of the results were restated as undetected at an estimated detection limit (assigned a UJ qualifier) because of detections of target analytes in the associated laboratory blanks. Two percent of the sediment data were qualified as estimated because of other QC issues, and 86 percent of the results were qualified as estimated and tentatively identified (assigned an NJ qualifier) because of the loss of the associated laboratory blank during sample extraction. For the tissue samples, 3 percent of the results were restated as undetected (assigned a U qualifier) because of detections of target analytes in associated laboratory blanks. Three percent of the tissue data were qualified as estimated (assigned a J qualifier) because of exceedances of control limits for internal standards or other quality control issues. None of the PCDD/F data for sediment or tissues samples were rejected during validation.

The precision and accuracy of the PCDD/F data was acceptable. The completeness of the PCDD/F data was 100 percent for Round 1 sediment and tissue samples. The summary of qualified data for PCDD/F is included in Tables E-19 and E-25. The Round 1 PCB congener data met the project DQOs and are usable for all project purposes

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Table E-1. Summary of Analytical Methods for Sediment Samples.

Analytes	Laboratory	Analytical Method	
		Protocol	**Procedure**
Conventionals			
Total solids	ARI	EPA-160.3/SM 2540B	Gravimetric - total residue by drying oven
Total organic carbon	ARI	Plumb 1981	Combustion; coulometric titration
Grain size	REGL	PSEP 1986	Sieves and pipette method
Metals			
Aluminum, chromium, copper, manganese, nickel, zinc	ARI	SW846-6010B	ICP/AES
Antimony	ARI	SW846-7041	GFAA
Arsenic	ARI	SW846-7060A	GFAA
Cadmium	ARI	SW846-7131A	GFAA
Lead	ARI	SW846-7421	GFAA
Mercury	ARI	SW846-7471A	CVAA
Selenium	ARI	SW846-7740	GFAA
Silver	ARI	SW846-7761	GFAA
Organochlorine pesticides and selected SVOCs	ARI	SW846-8081A	GC/ECD
PCB Aroclors	ARI	SW846-8082	GC/ECD
Chlorinated herbicides and pentachlorophenol	ARI	SW846-8151A	GC/MS
Volatile organic compounds	ARI	SW846-8260B	GC/MS
Volatile organic compounds (VOC-SIM)[a]	ARI	SW846-8260B	GC/MS
Semivolatile organic compounds	ARI	SW846-8270C	GC/MS
Semivolatile organic compounds (SVOC-SIM)[a]	ARI	SW846-8270C	GC/MS (SIM)
Butyltins	ARI	Krone et al. 1988	GC/FPD
Chlorinated dioxins and furans	Axys	EPA-1613B	HRGC/HRMS
PCB congeners	Axys	EPA-1668A	HRGC/HRMS

Notes:

ARI	Analytical Resources Incorporated
Axys	AXYS Analytical Services LTD.
REGL	Rosa Environmental and Geotechnical Laboratory
ICP/AES	Inductively Coupled Plasma - Atomic Emission Spectrometry
GFAA	Graphite Furnace Atomic Absorption
GC/ECD	Gas Chromatography - Electron Capture Detector
GC/MS	Gas Chromatography - Mass Spectrometry
GC/MS (SIM)	Gas Chromatography - Mass Spectrometry (Selective Ion Monitoring)
GC/FPD	Gas Chromatogphy - Flame Photometric Detector
HRGC/HRMS	High Resolution Gas Chromatography - High Resolution Mass Spectrometry

[a] SIM used for low-level analytes.

Table E-2. Summary of Analytical Methods for Tissue Samples

Analytes	Laboratory	Analytical Method	
		Protocol	Procedure
Conventionals			
Lipids	CAS	PSEP 1986	Gravimetric
Total solids	CAS	Laboratory SOP	Lyophilization
Metals			
Aluminum[a], chromium, manganese[a], zinc[a]	CAS	SW846-6010B	ICP/AES
Aluminum[a], antimony, arsenic, cadmium, copper, lead, manganese[a], nickel, silver, thallium, zinc[a]	CAS	SW846-6020[b]	ICP/MS
Mercury	CAS	SW846-7471A	CVAA
Selenium	CAS	SW846-7740	GFAA
Semivolatile organic compounds	ARI	SW846-8270C	GC/MS
Semivolatile organic compounds (SVOC-SIM)[c]	ARI	SW846-8270C	GC/MS
Chlorinated dioxins and furans	Axys	EPA-1613B	HRGC/HRMS
PCB congeners	Axys	EPA-1668A	HRGC/HRMS
Butyltins	CAS	Krone et al. 1988	GC/FPD
Organochlorine pesticides and selected SVOCs	CAS	SW846-8081A	GC/ECD
PCB aroclors	CAS	SW846-8082	GC/ECD

Notes:
[a]Analytical method was chosen according to level of analyte in sample
[b]SW846-6020 used for low concentration metals
[c]SIM used for low-level analytes

CAS	Columbia Analytical Services
ARI	Analytical Resources Incorporated
Axys	AXYS Analytical Services LTD.
ICP/AES	Inductively Coupled Plasma - Atomic Emission Spectrometry
ICP/MS	Inductively Coupled Plasma - Mass Spectrometry
CVAA	Cold Vapor Atomic Absorption Spectrometry
GFAA	Graphite Furnace Atomic Absorption Spectrometry
GC/MS	Gas Chromatography - Mass Spectrometry
HRGC/HRMS	High Resolution Gas Chromatography - High Resolution Mass Spectrometry
GC/FPD	Gas Chromatography - Flame Photometric Detector
GC/ECD	Gas Chromatography - Electron Capture Detector

Table E-3. Percent Completeness per Parameter Group

Sample type	Analyte Group	Total # of Data Points	Number of Data Points		Completeness (%)
			Accepted	Rejected	
Sediment	TOC/TS	146	146	0	100
	Grain size	949	949	0	100
	Metals	876	826	50	94
	Butyltins	30	26	4	87
	PCB aroclors	511	511	0	100
	Organochlorine pesticides	2,149	2,011	138	94
	Semivolatile organic compounds	6,797	6,283	514	92
	Chlorinated herbicides	730	730	0	100
	PCB congeners	1,919	1,919	0	100
	Volatile organic compounds	76	76	0	100
	Chlorinated dioxins/furans	300	300	0	100
Tissue	Lipids/TS	312	312	0	100
	Metals	1,677	1,677	0	100
	Mercury	132	132	0	100
	Butyltins	8	8	0	100
	PCB aroclors	1,170	1,170	0	100
	Organochlorine pesticides	5,136	5,130	6	99.9
	Semivolatile organic compounds	11,697	11,654	43	99.6
	PCB congeners	7,801	7,801	0	100
	Chlorinated dioxins/furans	1,225	1,225	0	100
	Sediment Subtotal	**14,483**	**13,777**	**706**	**95**
	Tissue Subtotal	**29,158**	**29,109**	**49**	**99.8**
	Round 1 Sampling Project Total	**43,641**	**42,886**	**755**	**98**

Table E-4. Laboratory Control Limits for Sediment Surrogate Samples.

Analysis	Percent Recovery	OPR Concentration Limits (ng/mL)
Butyltins		
Tripentyl tin	10-104	NA
Tripropyl tin	10-122	NA
Chlorinated Herbicides and Pentachlorophenol		
2,4-Dichlorophenylacetic acid	37-156	NA
Organochlorine Pesticides and Selected SVOCs		
Tetrachloro-*meta* -xylene (TCMX)	29-110	NA
Decachlorobiphenyl	18-151	NA
PCB Aroclors		
Tetrachloro-*meta* -xylene (TCMX)	20-118	NA
Decachlorobiphenyl	16-146	NA
Volatile Organic Compounds		
Dibromofluoromethane	40-160	NA
d4-1,2,-Dichloroethane	71-143	NA
d8-Toluene	79-118	NA
4-Bromofluorobenzene	69-126	NA
d4-1,2-Dichlorobenzene	79-119	NA
Volatile Organic Compounds - SIM		
d4-1,2-Dichloroethane	50-150	NA
Trifluorotoluene	50-150	NA
4-Bromofluorobenzene	50-150	NA
Semivolatile Organic Compounds		
d4-2-Chlorophenol	32-91	NA
d4-1,2-Dichlorobenzene	26-85	NA
2,4,6-Tribromophenol	23-131	NA
2-Fluorophenol	25-92	NA
d5-Phenol	29-93	NA
d5-Nitrobenzene	20-102	NA
2-Fluorobiphenyl	34-99	NA
d14-p-Terphenyl	43-128	NA
Semivolatile Organic Compounds - SIM		
d10-2-Methylnaphthalene	11-127	NA
d14-Dibenzo(a,h)anthracene	10-153	NA
PCB Congeners (OPR[a])		
13C12-2-Monochlorobiphenyl	NA	400-2800
13C12-4-Monochlorobiphenyl	NA	400-2800
13C12-2,2'-Dichlorobiphenyl	NA	600-2800
13C12-4,4'-Dichlorobiphenyl	NA	600-2800

Table E-4. Laboratory Control Limits for Sediment Surrogate Samples.

Analysis	Percent Recovery	OPR Concentration Limits (ng/mL)
13C12-2,2',6-Trichlorobiphenyl	NA	600-2800
13C12-2,4,4'-Trichlorobiphenyl	NA	800-2500
13C12-3,4,4'-Trichlorobiphenyl	NA	600-2800
13C12-2,2',6,6'-Tetrachlorobiphenyl	NA	600-2800
13C12-3,3',4,4'-Tetrachlorobiphenyl	NA	600-2800
13C12-3,4,4',5-Tetrachlorobiphenyl	NA	600-2800
13C12-2,2',4,6,6'-Pentachlorobiphenyl	NA	600-2800
13C12-2,3,3',4,4'-Pentachlorobiphenyl	NA	600-2800
13C12-2,3,3',5,5'-Pentachlorobiphenyl	NA	800-2500
13C12-2,3,4,4',5-Pentachlorobiphenyl	NA	600-2800
13C12-2,3',4,4',5-Pentachlorobiphenyl	NA	600-2800
13C12-2',3,4,4',5-Pentachlorobiphenyl	NA	600-2800
13C12-3,3',4,4',5-Pentachlorobiphenyl	NA	600-2800
13C12-2,2',4,4',6,6'-Hexachlorobiphenyl	NA	600-2800
13C12-2,3,3',4,4',5-Hexachlorobiphenyl	NA	1200-5600
13C12-2,3,3',4,4',5'-Hexachlorobiphenyl	NA	1200-5600
13C12-2,3',4,4',5,5'-Hexachlorobiphenyl	NA	600-2800
13C12-3,3',4,4',5,5'-Hexachlorobiphenyl	NA	600-2800
13C12-2,2',3,3',5,5',6-Heptachlorobiphenyl	NA	800-2500
13C12-2,2',3,4',5,6,6'-Heptachlorobiphenyl	NA	600-2800
13C12-2,3,3',4,4',5,5'-Heptachlorobiphenyl	NA	600-2800
13C12-2,2',3,3',5,5',6,6'-Octachlorobiphenyl	NA	600-2800
13C12-2,3,3',4,4',5,5',6-Octachlorobiphenyl	NA	600-2800
13C12-2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	NA	600-2800
13C12-2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	NA	600-2800
13C12-Decachlorobiphenyl	NA	600-2800
Chlorinated Dioxins and Furans		
13C12-2,3,7,8-TCDD	NA	20-175
13C12-1,2,3,7,8-PeCDD	NA	21-227
13C12-1,2,3,4,7,8-HxCDD	NA	21-193
13C12-1,2,3,6,7,8-HxCDD	NA	25-163
13C12-1,2,3,4,6,7,8-HpCDD	NA	26-166
13C12-OCDD	NA	26-397
13C12-2,3,7,8-TCDF	NA	22-152
13C12-1,2,3,7,8-PeCDF	NA	21-192
13C12-2,3,4,7,8-PeCDF	NA	13-328
13C12-1,2,3,4,7,8-HxCDF	NA	19-202
13C12-1,2,3,6,7,8-HxCDF	NA	21-159
13C12-1,2,3,7,8,9-HxCDF	NA	17-205
13C12-2,3,4,6,7,8-HxCDF	NA	22-176
13C12-1,2,3,4,6,7,8-HpCDF	NA	21-158
13C12-1,2,3,4,7,8,9-HpCDF	NA	20-186
37Cl4-2,3,7,8-TCDD	NA	3.1-19.1

Table E-5. Laboratory Control Limits for Sediment Matrix Spike and Laboratory Control Samples

Analysis	Matrix Spike Recovery (percent)	Laboratory Control Sample Recovery (percent)	OPR Concentration Limits (ng/mL)	Type of Duplicate	Control Limit Relative Percent Difference
Conventional Analyses					
Grain size	NA	NA	NA	Triplicate	NA[c]
Total organic carbon	75-125	80-120	NA	LD	35
Total solids	NA	NA	NA	LD	35
Metals					
Aluminum	75-125	NA[d]	NA	LD	40
Antimony	75-125	NA[d]	NA	LD	40
Arsenic	75-125	NA[d]	NA	LD	40
Cadmium	75-125	NA[d]	NA	LD	40
Chromium	75-125	NA[d]	NA	LD	40
Copper	75-125	NA[d]	NA	LD	40
Lead	75-125	NA[d]	NA	LD	40
Mercury	75-125	NA[d]	NA	LD	40
Nickel	75-125	NA[d]	NA	LD	40
Selenium	75-125	NA[d]	NA	LD	40
Silver	75-125	NA[d]	NA	LD	40
Zinc	75-125	NA[d]	NA	LD	40
Butyltins					
Tetrabutyl Tin	11-131	19-132	NA	MSD	30
Tributyl Tin	10-167	35-153	NA	MSD	30
Dibutyl Tin	10-139	10-141	NA	MSD	30
Butyl Tin	10-95	10-116	NA	MSD	30
Chlorinated Herbicides and Pentachlorophenol					
2,4,5-TP (Silvex)	16-164	40-140	NA	LCSD	30
2,4-D	11-120	29-108	NA	LCSD	30
Dicamba	21-160	27-153	NA	LCSD	30
Organochlorine Pesticides and Selected SVOCs					
gamma-BHC (Lindane)	10-114	52-107	NA	MSD	30
Heptachlor	10-129	66-107	NA	MSD	30
Aldrin	10-112	66-105	NA	MSD	30
Dieldrin	10-144	75-116	NA	MSD	30
Endrin	10-147	70-134	NA	MSD	30
4,4'-DDT	10-161	60-116	NA	MSD	30
PCB Aroclors					
Aroclor 1242	15-143	54-125	NA	LCSD	30
Volatile Organic Compounds					
Dichlorodifluoromethane	30-160	60-140	NA	LCSD	30
Chloromethane	30-160	30-139	NA	LCSD	30
Vinyl Chloride	30-160	44-149	NA	LCSD	30
Bromomethane	30-160	45-151	NA	LCSD	30
Chloroethane	30-160	60-136	NA	LCSD	30
Trichlorofluoromethane	30-160	55-137	NA	LCSD	30
Acrolein	30-160	22-168	NA	LCSD	30
1,1,2-Trichloroethane	30-160	51-146	NA	LCSD	30
Acetone	30-160	43-130	NA	LCSD	30
1,1-Dichloroethene	48-147	63-135	NA	LCSD	30
Bromoethane	30-160	56-131	NA	LCSD	30
Iodomethane	30-160	12-168	NA	LCSD	30
Methylene Chloride	30-160	25-140	NA	LCSD	30
Acrylonitrile	30-160	59-137	NA	LCSD	30
Carbon Disulfide	30-160	49-157	NA	LCSD	30

Table E-5. Laboratory Control Limits for Sediment Matrix Spike and Laboratory Control Samples

Analysis	Matrix Spike Recovery (percent)	Laboratory Control Sample Recovery (percent)	OPR Concentration Limits (ng/mL)	Type of Duplicate	Control Limit Relative Percent Difference
Methyl tert-butyl ether	30-160	60-140	NA	LCSD	30
trans-1,2-Dichloroethene	30-160	71-132	NA	LCSD	30
Vinyl Acetate	30-160	32-115	NA	LCSD	30
1,1-Dichloroethane	30-160	75-127	NA	LCSD	30
2-Butanone	30-160	60-138	NA	LCSD	30
2,2-Dichloropropane	30-160	80-133	NA	LCSD	30
cis-1,2-Dichloroethene	30-160	80-134	NA	LCSD	30
Chloroform	30-160	74-122	NA	LCSD	30
Bromochloromethane	30-160	76-125	NA	LCSD	30
1,1,1-Trichloroethane	30-160	80-126	NA	LCSD	30
1,1-Dichloropropene	30-160	87-126	NA	LCSD	30
Carbon Tetrachloride	30-160	78-135	NA	LCSD	30
1,2-Dichloroethane	30-160	74-131	NA	LCSD	30
Benzene	63-122	81-120	NA	LCSD	30
Trichloroethene	55-140	72-126	NA	LCSD	30
1,2-Dichloropropane	30-160	83-122	NA	LCSD	30
Bromodichloromethane	30-160	82-125	NA	LCSD	30
Dibromomethane	30-160	78-122	NA	LCSD	30
2-Chloroethyl Vinylether	30-160	49-160	NA	LCSD	30
4-Methyl-2-pentanone	30-160	67-141	NA	LCSD	30
trans-1,3-Dichloropropene	30-160	82-128	NA	LCSD	30
Toluene	53-129	78-122	NA	LCSD	30
cis-1,3-Dichloropropene	30-160	73-127	NA	LCSD	30
2-Hexanone	30-160	60-145	NA	LCSD	30
1,1,2-Trichloroethane	30-160	76-125	NA	LCSD	30
1,3-Dichloropropane	30-160	80-126	NA	LCSD	30
Tetrachloroethene	30-160	84-129	NA	LCSD	30
Dibromochloromethane	30-160	77-134	NA	LCSD	30
1,2-Dibromoethane	30-160	73-126	NA	LCSD	30
Chlorobenzene	60-130	86-118	NA	LCSD	30
Ethylbenzene	30-160	87-125	NA	LCSD	30
1,1,2,2-Tetrachloroethane	30-160	73-133	NA	LCSD	30
m,p-Xylene	30-160	86-122	NA	LCSD	30
o-Xylene	30-160	84-119	NA	LCSD	30
Styrene	30-160	88-122	NA	LCSD	30
Isopropylbenzene	30-160	85-132	NA	LCSD	30
Bromoform	30-160	75-134	NA	LCSD	30
1,1,1,2-Tetrachloroethane	30-160	80-129	NA	LCSD	30
1,2,3-Trichloropropane	30-160	75-136	NA	LCSD	30
trans-1,4-Dichloro-2-butene	30-160	50-118	NA	LCSD	30
n-Propylbenzene	30-160	87-136	NA	LCSD	30
Bromobenzene	30-160	85-126	NA	LCSD	30
1,3,5-Trimethylbenzene	30-160	87-132	NA	LCSD	30
2-Chlorotoluene	30-160	81-130	NA	LCSD	30
4-Chlorotoluene	30-160	78-132	NA	LCSD	30
tert-Butylbenzene	30-160	83-128	NA	LCSD	30
1,2,4-Trimethylbenzene	30-160	89-133	NA	LCSD	30
sec-Butylbenzene	30-160	87-134	NA	LCSD	30
4-Isopropyltoluene	30-160	89-133	NA	LCSD	30
1,3-Dichlorobenzene	30-160	86-124	NA	LCSD	30
1,4-Dichlorobenzene	30-160	84-123	NA	LCSD	30
n-Butylbenzene	30-160	87-135	NA	LCSD	30
1,2-Dichlorobenzene	30-160	85-120	NA	LCSD	30
1,2-Dibromo-3-chloropropane	30-160	63-130	NA	LCSD	30
1,2,4-Trichlorobenzene	30-160	83-132	NA	LCSD	30
Hexachlorobutadiene	30-160	79-142	NA	LCSD	30
Naphthalene	30-160	73-136	NA	LCSD	30
1,2,3-Trichlorobenzene	30-160	82-128	NA	LCSD	30
Volatile Organic Compounds - SIM					
Vinyl chloride	50-150	50-150	NA	LCSD	30

Table E-5. Laboratory Control Limits for Sediment Matrix Spike and Laboratory Control Samples

Analysis	Matrix Spike Recovery (percent)	Laboratory Control Sample Recovery (percent)	OPR Concentration Limits (ng/mL)	Type of Duplicate	Control Limit Relative Percent Difference
1,1-Dichloroethene	50-150	50-150	NA	LCSD	30
MTBE	50-150	50-150	NA	LCSD	30
Benzene	50-150	50-150	NA	LCSD	30
Trichloroethene	50-150	50-150	NA	LCSD	30
Toluene	50-150	50-150	NA	LCSD	30
Tetrachloroethene	50-150	50-150	NA	LCSD	30
Ethyl benzene	50-150	50-150	NA	LCSD	30
m,p-xylene	50-150	50-150	NA	LCSD	30
o-xylene	50-150	50-150	NA	LCSD	30
Semivolatile Organic Compounds					
Phenol	11-118	43-108	NA	MSD	30
2-Chlorophenol	11-115	46-104	NA	MSD	30
1,4-Dichlorobenzene	10-91	35-83	NA	MSD	30
N-nitroso-di-n-propylamine	10-96	25-94	NA	MSD	30
1,2,4-Trichlorobenzene	10-94	29-85	NA	MSD	30
4-Chloro-3-methylphenol	15-111	42-98	NA	MSD	30
Acenaphthene	13-113	40-99	NA	MSD	30
4-Nitrophenol	10-148	27-133	NA	MSD	30
2,4-Dinitrotoluene	10-126	34-108	NA	MSD	30
Pentachlorophenol	14-153	51-128	NA	MSD	30
Pyrene	12-120	32-122	NA	MSD	30
Semivolatile Organic Compounds - SIM					
Phenanthrene	10-139	39-121	NA	MSD	30
Chrysene	10-144	41-127	NA	MSD	30
Benzo(k)fluoranthene	10-162	39-142	NA	MSD	30
PCB Congeners (OPR[a])					
2-Monochlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
4-Monochlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2'-Dichlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
4,4'-Dichlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',6-Trichlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
3,4,4'-Trichlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',6,6'-Tetrachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
3,3',4,4'-Tetrachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
3,4,4',5-Tetrachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',4,6,6'-Pentachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,3,3',4,4'-Pentachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,3,4,4',5-Pentachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,3',4,4',5-Pentachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2',3,4,4',5-Pentachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
3,3',4,4',5-Pentachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',4,4',6,6'-Hexachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,3,3',4,4',5-Hexachlorobiphenyl	NA[b]	NA	50-150	NA[b]	40
2,3,3',4,4',5'-Hexachlorobiphenyl	NA[b]	NA	50-150	NA[b]	40
2,3',4,4',5,5'-Hexachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
3,3',4,4',5,5'-Hexachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',3,4',4,6,6'-Heptachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,3,3',4,4',5,5'-Heptachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,3,3',4,4',5,5',6-Octachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
Decachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40

Table E-5. Laboratory Control Limits for Sediment Matrix Spike and Laboratory Control Samples

Analysis	Matrix Spike Recovery (percent)	Laboratory Control Sample Recovery (percent)	OPR Concentration Limits (ng/mL)	Type of Duplicate	Control Limit Relative Percent Difference
Chlorinated Dioxins and Furans (OPR[b])					
2,3,7,8-TCDD	NA[c]	67-158	7.4-17.4	NA[c]	40
1,2,3,7,8-PeCDD	NA[c]	70-142	35-71	NA[c]	40
1,2,3,4,7,8-HxCDD	NA[c]	70-164	35-82	NA[c]	40
1,2,3,6,7,8-HxCDD	NA[c]	78-134	38-67	NA[c]	40
1,2,3,7,8,9-HxCDD	NA[c]	64-162	32-81	NA[c]	40
1,2,3,4,6,7,8-HpCDD	NA[c]	70-140	35-70	NA[c]	40
OCDD	NA[c]	78-144	78-144	NA[c]	40
2,3,7,8-TCDF	NA[c]	75-158	7.5-15.8	NA[c]	40
1,2,3,7,8-PeCDF	NA[c]	80-134	40-67	NA[c]	40
2,3,4,7,8-PeCDF	NA[c]	68-160	34-80	NA[c]	40
1,2,3,4,7,8-HxCDF	NA[c]	72-134	36-67	NA[c]	40
1,2,3,6,7,8-HxCDF	NA[c]	84-130	42-65	NA[c]	40
1,2,3,7,8,9-HxCDF	NA[c]	78-130	39-65	NA[c]	40
2,3,4,6,7,8-HxCDF	NA[c]	70-156	35-78	NA[c]	40
1,2,3,4,6,7,8-HpCDF	NA[c]	82-122	41-61	NA[c]	40
1,2,3,4,7,8,9-HpCDF	NA[c]	78-138	39-69	NA[c]	40
OCDF	NA[c]	63-170	63-170	NA[c]	40

Notes:

[a] RPD control limit is not applicable. Laboratory control limit is = 10 percent in the weight of the fraction.

[b] Ongoing Precision and Recovery standard (OPR): a laboratory blank spike with known quanitities of analytes. The OPR is analyzed exactly like a sample. Its purpose is to assure that the results produced by the laboratory remain within the limits specified in this method for precision and recovery.

[c] OPR and laboratory duplicates will be used in EPA Method 1613B. The methodology doesn't require a MS/MSD.

[d] Percent recovery control limits are not applicable. Laboratory control limits are established based on the manufacturer's established range of acceptable concentrations.

Table E-6. Laboratory Control Limits for Tissue Surrogate Samples

Analysis	Percent Recovery	OPR Concentration Limits (ng/mL)
Butyltins		
Tripentyl Tin	13-113	NA
Tripropyltin hydride	26-169	NA
Organochlorine Pesticides and Selected SVOCs		
Tetrachloro-meta-xylene (TCMX)	38-109	NA
Decachlorobiphenyl	51-120	NA
PCB Aroclors		
Decachlorobiphenyl	40-151	NA
Tetrachloro-meta-xylene (TCMX)	70-130	NA
Semivolatile Organic Compounds		
d4-2-Chlorophenol	41-114	NA
d4-1,2-Dichlorobenzene	33-120	NA
2,4,6-Tribromophenol	32-105	NA
2-Fluorophenol	42-118	NA
d5-Phenol	30-160	NA
d5-Nitrobenzene	39-113	NA
2-Fluorobiphenyl	37-119	NA
d14-p-Terphenyl	30-160	NA
PCB Congeners (OPR[a])		
13C12-2-Monochlorobiphenyl	NA	400-2800
13C12-4-Monochlorobiphenyl	NA	400-2800
13C12-2,2'-Dichlorobiphenyl	NA	600-2800
13C12-4,4'-Dichlorobiphenyl	NA	600-2800
13C12-2,2',6-Trichlorobiphenyl	NA	600-2800
13C12-2,4,4'-Trichlorobiphenyl	NA	800-2500
13C12-3,4,4'-Trichlorobiphenyl	NA	600-2800
13C12-2,2',6,6'-Tetrachlorobiphenyl	NA	600-2800
13C12-3,3',4,4'-Tetrachlorobiphenyl	NA	600-2800
13C12-3,4,4',5-Tetrachlorobiphenyl	NA	600-2800
13C12-2,2',4,6,6'-Pentachlorobiphenyl	NA	600-2800
13C12-2,3,3',4,4'-Pentachlorobiphenyl	NA	600-2800
13C12-2,3,3',5,5'-Pentachlorobiphenyl	NA	800-2500
13C12-2,3,4,4',5-Pentachlorobiphenyl	NA	600-2800
13C12-2,3',4,4',5-Pentachlorobiphenyl	NA	600-2800
13C12-2',3,4,4',5-Pentachlorobiphenyl	NA	600-2800
13C12-3,3',4,4',5-Pentachlorobiphenyl	NA	600-2800
13C12-2,2',4,4',6,6'-Hexachlorobiphenyl	NA	600-2800

Table E-6. Laboratory Control Limits for Tissue Surrogate Samples

Analysis	Percent Recovery	OPR Concentration Limits (ng/mL)
13C12-2,3,3',4,4',5-Hexachlorobiphenyl	NA	1200-5600
13C12-2,3,3',4,4',5'-Hexachlorobiphenyl	NA	1200-5600
13C12-2,3',4,4',5,5'-Hexachlorobiphenyl	NA	600-2800
13C12-3,3',4,4',5,5'-Hexachlorobiphenyl	NA	600-2800
13C12-2,2',3,3',5,5',6-Heptachlorobiphenyl	NA	800-2500
13C12-2,2',3,4',5,6,6'-Heptachlorobiphenyl	NA	600-2800
13C12-2,3,3',4,4',5,5'-Heptachlorobiphenyl	NA	600-2800
13C12-2,2',3,3',5,5',6,6'-Octachlorobiphenyl	NA	600-2800
13C12-2,3,3',4,4',5,5',6-Octachlorobiphenyl	NA	600-2800
13C12-2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	NA	600-2800
13C12-2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	NA	600-2800
13C12-Decachlorobiphenyl	NA	600-2800
Chlorinated Dioxins and Furans		
13C12-2,3,7,8-TCDD	NA	20-175
13C12-1,2,3,7,8-PeCDD	NA	21-227
13C12-1,2,3,4,7,8-HxCDD	NA	21-193
13C12-1,2,3,6,7,8-HxCDD	NA	25-163
13C12-1,2,3,4,6,7,8-HpCDD	NA	26-166
13C12-OCDD	NA	26-397
13C12-2,3,7,8-TCDF	NA	22-152
13C12-1,2,3,7,8-PeCDF	NA	21-192
13C12-2,3,4,7,8-PeCDF	NA	13-328
13C12-1,2,3,4,7,8-HxCDF	NA	19-202
13C12-1,2,3,6,7,8-HxCDF	NA	21-159
13C12-1,2,3,7,8,9-HxCDF	NA	17-205
13C12-2,3,4,6,7,8-HxCDF	NA	22-176
13C12-1,2,3,4,6,7,8-HpCDF	NA	21-158
13C12-1,2,3,4,7,8,9-HpCDF	NA	20-186
37Cl4-2,3,7,8-TCDD	NA	3.1-19.1

Notes:

[a] Ongoing Precision and Recovery standard (OPR): a laboratory blank spike with known quanitities of analytes. The OPR is analyzed exactly like a sample. Its purpose is to assure that the results produced by the laboratory remain within the limits specified in this method for precision and recovery.

Table E-7. Laboratory Control Limits for Tissue Matrix Spike and Laboratory Control Samples

Analysis	Matrix Spike Recovery (percent)	Laboratory Control Sample Recovery (percent)	OPR Concentration Limits (ng/mL)	Type of Duplicate	Control Limit Relative Percent Difference
Conventional Analyses					
Total Lipids	NA	NA	NA	Triplicate	30
Metals					
Aluminum (SW846-6020)	70-130	NA[c]	NA	LD	30
Aluminum (SW846-6010B)	75-125	NA[c]	NA	LD	20
Antimony	70-130	NA[c]	NA	LD	30
Arsenic	70-130	NA[c]	NA	LD	30
Cadmium	70-130	NA[c]	NA	LD	30
Chromium	75-125	NA[c]	NA	LD	30
Copper	70-130	NA[c]	NA	LD	30
Lead	70-130	NA[c]	NA	LD	30
Manganese	70-130	NA[c]	NA	LD	30
Mercury	60-130	NA[c]	NA	LD	30
Nickel	70-130	NA[c]	NA	LD	30
Selenium	60-130	NA[c]	NA	LD	30
Silver	70-130	NA[c]	NA	LD	30
Thallium	70-130	NA[c]	NA	LD	30
Zinc	75-125	NA[c]	NA	LD	30
Butyltins					
Tetrabutyl Tin	25-126	24-134	NA	MSD	30
Tributyl Tin	10-203	38-188	NA	MSD	30
Dibutyl Tin	29-147	23-182	NA	MSD	30
Butyl tin trichloride	10-98	10-186	NA	MSD	30
Organochlorine Pesticides and Selected SVOCs					
alpha-BHC	21-144	42-136	NA	MSD/LCSD	40
Hexachlorobenzene	20-132	27-107	NA	MSD/LCSD	40
beta-BHC	17-156	40-142	NA	MSD/LCSD	40
gamma-BHC (Lindane)	32-146	45-141	NA	MSD/LCSD	40
delta-BHC	36-140	17-155	NA	MSD/LCSD	40
Heptachlor	38-146	45-130	NA	MSD/LCSD	40
Aldrin	31-151	40-148	NA	MSD/LCSD	40
Heptachlor epoxide	34-155	42-144	NA	MSD/LCSD	40
gamma-Chlordane	31-149	41-143	NA	MSD/LCSD	40
Endosulfan I	10-164	26-154	NA	MSD/LCSD	40
alpha-Chlordane	23-148	41-139	NA	MSD/LCSD	40
Dieldrin	27-175	44-151	NA	MSD/LCSD	40
4,4'-DDE	38-137	38-158	NA	MSD/LCSD	40
Endrin	10-198	45-155	NA	MSD/LCSD	40
Endosulfan II	10-179	35-151	NA	MSD/LCSD	40
4,4'-DDD	41-145	37-154	NA	MSD/LCSD	40
Endrin aldehyde	10-125	24-114	NA	MSD/LCSD	40
Endosulfan sulfate	45-145	52-139	NA	MSD/LCSD	40
4,4'-DDT	34-154	48-156	NA	MSD/LCSD	40
Endrin ketone	10-217	47-142	NA	MSD/LCSD	40
Methoxychlor	10-187	40-159	NA	MSD/LCSD	40
Toxaphene	70-130	70-130	NA	MSD/LCSD	40
Oxychlordane	NA	70-130	NA	LCSD	40
2,4'-DDE	NA	70-130	NA	LCSD	40
trans-Nonachlor	NA	70-130	NA	LCSD	40
2,4'-DDD	NA	70-130	NA	LCSD	40
cis-Nonachlor	NA	70-130	NA	LCSD	40
2,4'-DDT	NA	70-130	NA	LCSD	40
Mirex	NA	70-130	NA	LCSD	40
Hexachloroethane	NA	70-130	NA	LCSD	40
Hexachlorobutadiene	NA	70-130	NA	LCSD	40

Table E-7. Laboratory Control Limits for Tissue Matrix Spike and Laboratory Control Samples

Analysis	Matrix Spike Recovery (percent)	Laboratory Control Sample Recovery (percent)	OPR Concentration Limits (ng/mL)	Type of Duplicate	Control Limit Relative Percent Difference
PCB Aroclors					
Aroclor 1016	70-130	57-134	NA	MSD/LCSD	50/40
Aroclor 1260	70-130	64-136	NA	MSD/LCSD	50/40
Semivolatile Organic Compounds					
1,2-Dichlorobenzene	30-160	30-160	NA	MSD	30
1,2,4-Trichlorobenzene	30-160	30-160	NA	MSD	30
1,3-Dichlorobenzene	30-160	30-160	NA	MSD	30
1,4-Dichlorobenzene	30-160	30-160	NA	MSD	30
2,3,4,5-Tetrachlorophenol	30-160	30-160	NA	MSD	30
2,4,6-Trichlorophenol	30-160	30-160	NA	MSD	30
2,4-Dinitrophenol	30-160	30-160	NA	MSD	30
2,4-Dinitrotoluene	30-160	30-160	NA	MSD	30
2-Chloronaphthalene	30-160	30-160	NA	MSD	30
2-Chlorophenol	30-160	30-160	NA	MSD	30
3,3'-Dichlorobenzidine	30-160	30-160	NA	MSD	30
4-Chloro-3-methylphenol	30-160	30-160	NA	MSD	30
4-Chloroaniline	30-160	30-160	NA	MSD	30
4-Methylphenol	30-160	30-160	NA	MSD	30
4-Nitrophenol	30-160	30-160	NA	MSD	30
4,6-Dinitro-2-methylphenol	30-160	30-160	NA	MSD	30
Acenaphthene	30-160	30-160	NA	MSD	30
Acenaphthylene	30-160	30-160	NA	MSD	30
Aniline	30-160	30-160	NA	MSD	30
Anthracene	30-160	30-160	NA	MSD	30
Benzo(a)anthracene	30-160	30-160	NA	MSD	30
Benzo(a)pyrene	30-160	30-160	NA	MSD	30
Benzo(b)fluoranthene	30-160	30-160	NA	MSD	30
Benzo(g,h,i)anthracene	30-160	30-160	NA	MSD	30
Benzo(g,h,i)perylene	30-160	30-160	NA	MSD	30
Benzo(k)fluoranthene	38-124	30-160	NA	MSD	30
Benzoic acid	30-160	30-160	NA	MSD	30
Bis(2-ethylhexyl)phthalate	30-160	30-160	NA	MSD	30
Carbazole	30-160	30-160	NA	MSD	30
Chrysene	42-117	30-160	NA	MSD	30
Dibenz(a,h)anthracene	30-160	30-160	NA	MSD	30
Di-n-octylphthalate	30-160	30-160	NA	MSD	30
Fluoranthene	30-160	30-160	NA	MSD	30
Fluorene	30-160	30-160	NA	MSD	30
Hexachlorobenzene	30-160	30-160	NA	MSD	30
Hexachlorobutadiene	30-160	30-160	NA	MSD	30
Hexachlorocyclopentadiene	30-160	30-160	NA	MSD	30
Hexachloroethane	30-160	30-160	NA	MSD	30
Indeno(1,2,3-cd)pyrene	30-160	30-160	NA	MSD	30
Naphthalene	30-160	30-160	NA	MSD	30
N-Nitrosodimethylamine	30-160	30-160	NA	MSD	30
N-nitroso-di-n-propylamine	30-160	26-102	NA	MSD	30
Pentachlorophenol	30-160	30-160	NA	MSD	30
Phenanthrene	49-118	30-160	NA	MSD	30
Phenol	30-160	30-160	NA	MSD	30
Pyrene	30-160	30-160	NA	MSD	30
PCB Congeners (OPR[a])					
2-Monochlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
4-Monochlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2'-Dichlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
4,4'-Dichlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',6-Trichlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
3,4,4'-Trichlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',6,6'-Tetrachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
3,3',4,4'-Tetrachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40

Table E-7. Laboratory Control Limits for Tissue Matrix Spike and Laboratory Control Samples

Analysis	Matrix Spike Recovery (percent)	Laboratory Control Sample Recovery (percent)	OPR Concentration Limits (ng/mL)	Type of Duplicate	Control Limit Relative Percent Difference
3,4,4',5-Tetrachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',4,6,6'-Pentachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,3,3',4,4'-Pentachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,3,4,4',5-Pentachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,3',4,4',5-Pentachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2',3,4,4',5-Pentachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
3,3',4,4',5-Pentachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',4,4',6,6'-Hexachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,3,3',4,4',5-Hexachlorobiphenyl	NA[b]	NA	50-150	NA[b]	40
2,3,3',4,4',5'-Hexachlorobiphenyl	NA[b]	NA	50-150	NA[b]	40
2,3',4,4',5,5'-Hexachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
3,3',4,4',5,5'-Hexachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',3,4',4,6,6'-Heptachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,3,3',4,4',5,5'-Heptachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',3,3',5,5',6,6'-Octachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,3,3',4,4',5,5',6-Octachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',3,3',4,4',5,5',6-Nonachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
2,2',3,3',4,5,5',6,6'-Nonachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
Decachlorobiphenyl	NA[b]	NA	25-75	NA[b]	40
Chlorinated Dioxins and Furans (OPR[a])					
2,3,7,8-TCDD	NA[b]	67-158	7.4-17.4	NA[b]	40
1,2,3,7,8-PeCDD	NA[b]	70-142	35-71	NA[b]	40
1,2,3,4,7,8-HxCDD	NA[b]	70-164	35-82	NA[b]	40
1,2,3,6,7,8-HxCDD	NA[b]	78-134	38-67	NA[b]	40
1,2,3,7,8,9-HxCDD	NA[b]	64-162	32-81	NA[b]	40
1,2,3,4,6,7,8-HpCDD	NA[b]	70-140	35-70	NA[b]	40
OCDD	NA[b]	78-144	78-144	NA[b]	40
2,3,7,8-TCDF	NA[b]	75-158	7.5-15.8	NA[b]	40
1,2,3,7,8-PeCDF	NA[b]	80-134	40-67	NA[b]	40
2,3,4,7,8-PeCDF	NA[b]	68-160	34-80	NA[b]	40
1,2,3,4,7,8-HxCDF	NA[b]	72-134	36-67	NA[b]	40
1,2,3,6,7,8-HxCDF	NA[b]	84-130	42-65	NA[b]	40
1,2,3,7,8,9-HxCDF	NA[b]	78-130	39-65	NA[b]	40
2,3,4,6,7,8-HxCDF	NA[b]	70-156	35-78	NA[b]	40
1,2,3,4,6,7,8-HpCDF	NA[b]	82-122	41-61	NA[b]	40
1,2,3,4,7,8,9-HpCDF	NA[b]	78-138	39-69	NA[b]	40
OCDF	NA[b]	63-170	63-170	NA[b]	40

Notes:

[a] Ongoing Precision and Recovery standard (OPR): a laboratory blank spike with known quanitities of analytes. The OPR is analyzed exactly like a sample. Its purpose is to assure that the results produced by the laboratory remain within the limits specified in this method for precision and recovery.

[b] OPR and laboratory duplicates will be used in EPA Methods 1668A and 1613B. The methodology doesn't require a MS/MSD.

[c] Percent recovery control limits are not applicable. Laboratory control limits are established based on the manufacturer's established range of acceptable concentrations.

Table E-8. Definitions of Data Qualifiers

Data Qualifier	Definition
U	The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
J	The associated numerical value is an estimated quantity.
R	The data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification. (Overrides all quals and their codes.)
N	Presumptive evidence of presence of material.
NJ	Presumptive evidence of the presence of the material at an estimated quantity.
UJ	The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.
T	The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 1 data.

Table E-9. Summary of Qualified Data.

Sample type	Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
			Detected	Undetected				
Sediment	TOC/TS	73	146	0	146	100	detected	
	Grain size	73	937	12	949	99	detected	
						1	undetected	
	Metals	73	663	213	876	76	detected	
						24	undetected	
						6	UJ	LB, MS, LCS, Furnace QC
						11	J	MS, LCS, Furnace QC
						6	R	MS, LCS, Furnace QC
	Butyltins	6	20	10	30	67	detected	
						33	undetected	
						27	J	Calibration
						13	R	Calibration
	PCB Aroclors	73	70	441	511	14	detected	
						86	undetected	
						2	J	Surrogates, Other
	Organochlorine pesticides	73	98	2051	2149	5	detected	
						95	undetected	
						4	UJ	Calibration
						< 1	J	Calibration, Compound quantitation
						6	R	Calibration, Surrogates, LRE, Chromatographic interference
	Semivolatile organic compounds	73	1669	5128	6797	25	detected	
						75	undetected	
						< 1	U	Calibration, LB
						5	UJ	HT, Calibration, LB, LCS, IS
						5	J	Calibration, LCS, Surrogates, IS, LRE, Confirmation criteria exceeded
						8	R	Calibration, LB, Surrogates, IS, LRE, Confirmation criteria exceeded
	Chlorinated herbicides	73	0	730	730	76	U	
						24	UJ	Calibration, LCS
	PCB congeners	12	1766	153	1919	92	detected	
						8	undetected	
						< 1	UJ	MRL/MDL elevated - chromatographic interference
						20	J	Co-elution
	Volatile organic compounds	1	1	75	76	1	detected	
						99	undetected	
						99	UJ	HT, Calibration, Surrogates
						1	J	HT
	Chlorinated dioxins/furans	12	294	6	300	98	detected	
						2	undetected	
						1	UJ	LB, Other
						2	J	Other
						86	NJ	Original blank lost during extraction.

Table E-9. Summary of Qualified Data.

Sample type	Analyte Group	Number of Samples	Number of Data Points Detected	Number of Data Points Undetected	Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
Tissue	Mercury	131	132	0	132	100	detected	
	Lipids/TS	129	312	0	312	100	detected	
	Metals	129	1274	403	1677	76	detected	
						24	undetected	
						10	U	LB
						2	UJ	LB, MS, Instrument QC, LD
						34	J	MS, LCS, Instrument QC, IS, LD
	Butyltins	2	6	2	8	75	detected	
						25	undetected	
	PCB Aroclors	129	190	980	1170	16	detected	
						84	undetected	
						10	UJ	Calibration
						5	J	Calibration, Compound quantitation, Confirmation criteria exceeded
	Organochlorine pesticides	129	901	4235	5136	18	detected	
						82	undetected	
						5	U	Analyte identification issues
						9	UJ	Calibration, LCS, Analyte identification issues
						3	J	Calibration, LCS, Surrogates, LRE, Analyte identification issues
						3	N	Analyte identification issues
						7	NJ	Analyte identification issues
						< 1	R	Analyte identification issues, Replicate precision
	Semivolatile organic compounds	129	172	12098	12270	1	detected	
						99	undetected	
						1	U	Calibration, LB, LCS, Confirmation criteria exceeded
						4	UJ	Calibration, LB, LCS, Surrogates, Confirmation criteria exceeded
						< 1	J	Calibration, LCS, Surrogates, LRE, Confirmation criteria exceeded, LB
						< 1	N	Confirmation criteria exceeded
						1	NJ	Confirmation criteria exceeded
						< 1	R	LCS
	PCB congeners	49	6499	1302	7801	83	detected	
						17	undetected	
						< 1	UJ	IS
						21	J	IS, Compound quantitation, Co-elution
						< 1	NJ	Compound quantitation, Co-elution
	Chlorinated dioxins/furans	49	1146	79	1225	94	detected	
						6	undetected	
						3	U	LB
						3	J	IS, Other

Notes:

Includes replicates and splits
Excludes field blanks

LB	Laboratory blank	TS	Total solids
LCS	Laboratory control sample	TOC	Total organic carbon
LRE	Linear range exceeded	HT	Holding times
IS	Internal standards	MRL	Method reporting limit
MDL	Method detection limit	LD	Laboratory duplicate
MS	Matrix Spike		

Table E-10. Definitions of Qualifiers and Qualifier Reason Codes

Code	Definition
Data Qualifiers	
J	The associated numerical value is an estimated quantity.
N	Presumptive evidence of presence of material.
NJ	Presumptive evidence of the presence of the material at an estimated quantity.
U	The material was analyzed for, but was not detected. The associated numerical value is the reported detection limit.
UJ	The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.
Laboratory Flags	
Inorganic Analytes	
*	Duplicate analysis is not within control limits.
N	Matrix spike recovery is not within control limits.
Organic Analytes	
B	Analyte found in associated blank.
E	Exceed calibration range of instrument.
J	Estimated value; the analyte was detected at a concentration between the method reporting limit and the method detection limit.
M	Estimated value; confirmed, but with low spectral match.
P	Gas chromatographic confirmation criteria were exceeded.
Qualifier Reason Codes	
1	Holding times were exceeded
5	Calibration control limits were exceeded
7	The analytes was present in an associated laboratory blank
8	Matrix spike recovery did not meet control limits
9	The relative percent difference between the matrix spike and matrix spike duplicate did not meet control limits
10	The laboratory control sample did not meet control limits
13	Surrogate recovery did not meet control limits
15	Control limits were not met for graphite furnace QC procedures
16	ICP serial dilution did not meet control limits
19	Internal standards did not meet control limits
20	The linear calibration range was exceeded
23	Other
L	The analyte concentration is below the method reporting limit.

Table E-11. Qualified Data for Metals in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0102R001SDS015C00	7440-36-0	Antimony	mg/kg	0.4	J	8
LWG0102R015SDS015C00	7440-36-0	Antimony	mg/kg	0.4	J	8
LWG0103R003SDS015C20	7440-36-0	Antimony	mg/kg	0.3	J	8
LWG0103R005SDS015C00	7440-36-0	Antimony	mg/kg	1	J	8
LWG0104B023SDS015C00	7440-36-0	Antimony	mg/kg	0.3	J	8
LWG0104B024SDS015C00	7440-36-0	Antimony	mg/kg	13	J	8
LWG0104R002SDS015C00	7440-36-0	Antimony	mg/kg	1.5	J	8
LWG0104R003SDS015C00	7440-36-0	Antimony	mg/kg	0.4	J	8
LWG0104R004SDS015C00	7440-36-0	Antimony	mg/kg	0.8	J	8
LWG0105B018SDS015C00	7440-36-0	Antimony	mg/kg	0.2	J	8
LWG0105R003SDS015C00	7440-36-0	Antimony	mg/kg	0.5	J	8
LWG0105R020SDS015C00	7440-36-0	Antimony	mg/kg	0.6	J	8
LWG0106B022SDS015C00	7440-36-0	Antimony	mg/kg	0.3	J	8
LWG0106B025SDS015C00	7440-36-0	Antimony	mg/kg	0.2	J	8
LWG0106B026SDS015C00	7440-36-0	Antimony	mg/kg	0.8	J	8
LWG0106R002SDS015C32	7440-36-0	Antimony	mg/kg	1	J	8
LWG0107B023SDS015C00	7440-36-0	Antimony	mg/kg	0.3	J	8
LWG0107R006SDS015C00	7440-36-0	Antimony	mg/kg	0.4	J	8
LWG0109B027SDS015C10	7440-36-0	Antimony	mg/kg	0.2	J	8
LWG0109R001SDS015C10	7440-36-0	Antimony	mg/kg	0.5	J	8
LWG0109R001SDS015C31	7440-36-0	Antimony	mg/kg	0.5	J	8
LWG0109R001SDS015C32	7440-36-0	Antimony	mg/kg	0.5	J	8
LWG0109R002SDS015C00	7440-36-0	Antimony	mg/kg	0.5	J	8
LWG0109B024SDS015C00	7440-43-9	Cadmium	mg/kg	0.04	J	15
LWG0103B030SDS015C00	7440-47-3	Chromium	mg/kg	14.8	J	9
LWG0103B031SDS015C00	7440-47-3	Chromium	mg/kg	24	J	9
LWG0103B033SDS015C00	7440-47-3	Chromium	mg/kg	15	J	9
LWG0104B023SDS015C00	7440-47-3	Chromium	mg/kg	16	J	9
LWG0104B024SDS015C00	7440-47-3	Chromium	mg/kg	24	J	9
LWG0105B018SDS015C00	7440-47-3	Chromium	mg/kg	28	J	9
LWG0105B019SDS015C00	7440-47-3	Chromium	mg/kg	13	J	9
LWG0107B023SDS015C00	7440-47-3	Chromium	mg/kg	19	J	9
LWG0107B024SDS015C00	7440-47-3	Chromium	mg/kg	20	J	9
LWG0108B032SDS015C00	7440-47-3	Chromium	mg/kg	22.3	J	9
LWG0109B024SDS015C00	7440-47-3	Chromium	mg/kg	15.7	J	9
LWG0109B026SDS015C00	7440-47-3	Chromium	mg/kg	13.2	J	9
LWG0102R001SDS015C00	7439-92-1	Lead	mg/kg	26	J	9
LWG0103R005SDS015C00	7439-92-1	Lead	mg/kg	52	J	9

Table E-11. Qualified Data for Metals in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0103R034SDS015C00	7439-92-1	Lead	mg/kg	5.3	UJ	7,9
LWG0103R040SDS015C00	7439-92-1	Lead	mg/kg	14	J	8
LWG0103R041SDS015C00	7439-92-1	Lead	mg/kg	16.4	J	8
LWG0104R003SDS015C00	7439-92-1	Lead	mg/kg	87	J	9
LWG0104R004SDS015C00	7439-92-1	Lead	mg/kg	62	J	9
LWG0105R003SDS015C00	7439-92-1	Lead	mg/kg	154	J	9
LWG0105R040SDS015C00	7439-92-1	Lead	mg/kg	10.8	J	8
LWG0105R041SDS015C00	7439-92-1	Lead	mg/kg	11.5	J	8
LWG0106R001SDS015C00	7439-92-1	Lead	mg/kg	55	J	9
LWG0106R002SDS015C10	7439-92-1	Lead	mg/kg	37	J	9
LWG0106R002SDS015C20	7439-92-1	Lead	mg/kg	57	J	9
LWG0106R002SDS015C31	7439-92-1	Lead	mg/kg	53	J	9
LWG0106R002SDS015C32	7439-92-1	Lead	mg/kg	61	J	9
LWG0106R004SDS015C00	7439-92-1	Lead	mg/kg	14	J	9
LWG0106R040SDS015C00	7439-92-1	Lead	mg/kg	26	J	8
LWG0107R003SDS015C00	7439-92-1	Lead	mg/kg	17	J	9
LWG0107R004SDS015C00	7439-92-1	Lead	mg/kg	9.9	J	9
LWG0107R006SDS015C00	7439-92-1	Lead	mg/kg	330	J	9
LWG0107R030SDS015C00	7439-92-1	Lead	mg/kg	14.1	J	8
LWG0107R040SDS015C00	7439-92-1	Lead	mg/kg	12.8	J	8
LWG0108R001SDS015C00	7439-92-1	Lead	mg/kg	19	J	9
LWG0108R003SDS015C00	7439-92-1	Lead	mg/kg	27	J	9
LWG0108R040SDS015C00	7439-92-1	Lead	mg/kg	45	J	8
LWG0108R041SDS015C00	7439-92-1	Lead	mg/kg	23	J	8
LWG0109R001SDS015C10	7439-92-1	Lead	mg/kg	44	J	8
LWG0109R001SDS015C20	7439-92-1	Lead	mg/kg	39	J	8
LWG0109R001SDS015C31	7439-92-1	Lead	mg/kg	52	J	8
LWG0109R001SDS015C32	7439-92-1	Lead	mg/kg	50	J	8
LWG0109R002SDS015C00	7439-92-1	Lead	mg/kg	33	J	8
LWG0109R040SDS015C00	7439-92-1	Lead	mg/kg	12.7	J	8
LWG0109R041SDS015C00	7439-92-1	Lead	mg/kg	9.8	J	8
LWG0102R001SDS015C00	7439-97-6	Mercury	mg/kg	0.09	UJ	9
LWG0103R005SDS015C00	7439-97-6	Mercury	mg/kg	0.09	J	9
LWG0103R034SDS015C00	7439-97-6	Mercury	mg/kg	0.05	UJ	9
LWG0104R003SDS015C00	7439-97-6	Mercury	mg/kg	0.06	UJ	9
LWG0104R004SDS015C00	7439-97-6	Mercury	mg/kg	0.07	UJ	9
LWG0105R003SDS015C00	7439-97-6	Mercury	mg/kg	0.12	J	9
LWG0106R001SDS015C00	7439-97-6	Mercury	mg/kg	0.09	UJ	9

Table E-11. Qualified Data for Metals in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0106R002SDS015C10	7439-97-6	Mercury	mg/kg	0.81	J	9
LWG0106R002SDS015C20	7439-97-6	Mercury	mg/kg	0.64	J	9
LWG0106R002SDS015C31	7439-97-6	Mercury	mg/kg	0.69	J	9
LWG0106R002SDS015C32	7439-97-6	Mercury	mg/kg	1.19	J	9
LWG0106R004SDS015C00	7439-97-6	Mercury	mg/kg	0.05	UJ	9
LWG0107R003SDS015C00	7439-97-6	Mercury	mg/kg	0.08	UJ	9
LWG0107R004SDS015C00	7439-97-6	Mercury	mg/kg	0.06	UJ	9
LWG0107R006SDS015C00	7439-97-6	Mercury	mg/kg	0.07	UJ	9
LWG0108R001SDS015C00	7439-97-6	Mercury	mg/kg	0.1	J	9
LWG0108R003SDS015C00	7439-97-6	Mercury	mg/kg	0.15	J	9
LWG0103B030SDS015C00	7440-02-0	Nickel	mg/kg	16	J	9
LWG0103B031SDS015C00	7440-02-0	Nickel	mg/kg	23	J	9
LWG0103B033SDS015C00	7440-02-0	Nickel	mg/kg	18	J	9
LWG0104B023SDS015C00	7440-02-0	Nickel	mg/kg	14	J	9
LWG0104B024SDS015C00	7440-02-0	Nickel	mg/kg	29	J	9
LWG0105B018SDS015C00	7440-02-0	Nickel	mg/kg	23	J	9
LWG0105B019SDS015C00	7440-02-0	Nickel	mg/kg	14	J	9
LWG0107B023SDS015C00	7440-02-0	Nickel	mg/kg	21	J	9
LWG0107B024SDS015C00	7440-02-0	Nickel	mg/kg	23	J	9
LWG0108B032SDS015C00	7440-02-0	Nickel	mg/kg	21	J	9
LWG0109B024SDS015C00	7440-02-0	Nickel	mg/kg	19	J	9
LWG0109B026SDS015C00	7440-02-0	Nickel	mg/kg	17	J	9
LWG0103B030SDS015C00	7782-49-2	Selenium	mg/kg	0.2	UJ	15
LWG0103B031SDS015C00	7782-49-2	Selenium	mg/kg	0.3	UJ	15
LWG0103B033SDS015C00	7782-49-2	Selenium	mg/kg	0.2	UJ	15
LWG0103R001SDS015C00	7782-49-2	Selenium	mg/kg	0.3	UJ	15
LWG0103R002SDS015C00	7782-49-2	Selenium	mg/kg	0.4	UJ	15
LWG0103R003SDS015C10	7782-49-2	Selenium	mg/kg	0.3	UJ	15
LWG0103R003SDS015C32	7782-49-2	Selenium	mg/kg	0.3	UJ	15
LWG0103R004SDS015C11	7782-49-2	Selenium	mg/kg	0.3	UJ	15
LWG0103R004SDS015C12	7782-49-2	Selenium	mg/kg	0.3	UJ	15
LWG0103R004SDS015C20	7782-49-2	Selenium	mg/kg	0.3	UJ	15
LWG0103R004SDS015C30	7782-49-2	Selenium	mg/kg	0.3	UJ	15
LWG0104B023SDS015C00	7782-49-2	Selenium	mg/kg	0.2	UJ	15
LWG0104B024SDS015C00	7782-49-2	Selenium	mg/kg	0.2	UJ	15
LWG0104R002SDS015C00	7782-49-2	Selenium	mg/kg	0.3	UJ	15
LWG0105B018SDS015C00	7782-49-2	Selenium	mg/kg	0.2	UJ	15
LWG0105B019SDS015C00	7782-49-2	Selenium	mg/kg	0.3	UJ	15

Table E-11. Qualified Data for Metals in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0105R001SDS015C00	7782-49-2	Selenium	mg/kg	0.3	UJ	15
LWG0105R020SDS015C00	7782-49-2	Selenium	mg/kg	0.3	UJ	15
LWG0107B023SDS015C00	7782-49-2	Selenium	mg/kg	0.2	UJ	15
LWG0107B024SDS015C00	7782-49-2	Selenium	mg/kg	0.2	UJ	15
LWG0108B032SDS015C00	7782-49-2	Selenium	mg/kg	0.2	UJ	15
LWG0109B024SDS015C00	7782-49-2	Selenium	mg/kg	0.2	UJ	15
LWG0109B026SDS015C00	7782-49-2	Selenium	mg/kg	0.2	UJ	15
LWG0102R015SDS015C00	7440-22-4	Silver	mg/kg	0.2	J	15
LWG0103B030SDS015C00	7440-22-4	Silver	mg/kg	0.02	UJ	10,15
LWG0103B031SDS015C00	7440-22-4	Silver	mg/kg	0.03	UJ	10
LWG0103B033SDS015C00	7440-22-4	Silver	mg/kg	0.02	UJ	10
LWG0103R001SDS015C00	7440-22-4	Silver	mg/kg	0.03	UJ	15
LWG0103R002SDS015C00	7440-22-4	Silver	mg/kg	0.05	J	15
LWG0103R003SDS015C10	7440-22-4	Silver	mg/kg	0.03	UJ	15
LWG0103R003SDS015C31	7440-22-4	Silver	mg/kg	0.03	UJ	15
LWG0103R004SDS015C11	7440-22-4	Silver	mg/kg	0.09	J	15
LWG0103R004SDS015C12	7440-22-4	Silver	mg/kg	0.07	J	15
LWG0103R004SDS015C20	7440-22-4	Silver	mg/kg	0.07	J	15
LWG0103R004SDS015C30	7440-22-4	Silver	mg/kg	0.06	J	15
LWG0103R032SDS015C00	7440-22-4	Silver	mg/kg	0.04	J	15
LWG0104B023SDS015C00	7440-22-4	Silver	mg/kg	0.02	UJ	10
LWG0104B024SDS015C00	7440-22-4	Silver	mg/kg	0.02	UJ	10,15
LWG0105B018SDS015C00	7440-22-4	Silver	mg/kg	0.02	J	10,15
LWG0105B019SDS015C00	7440-22-4	Silver	mg/kg	0.03	UJ	10
LWG0105R001SDS015C00	7440-22-4	Silver	mg/kg	0.03	UJ	15
LWG0105R020SDS015C00	7440-22-4	Silver	mg/kg	0.05	J	15
LWG0106R031SDS015C00	7440-22-4	Silver	mg/kg	0.04	J	15
LWG0107B023SDS015C00	7440-22-4	Silver	mg/kg	0.02	UJ	10,15
LWG0107B024SDS015C00	7440-22-4	Silver	mg/kg	0.02	UJ	10,15
LWG0108B032SDS015C00	7440-22-4	Silver	mg/kg	0.02	UJ	10
LWG0108R002SDS015C00	7440-22-4	Silver	mg/kg	0.03	UJ	15
LWG0109B024SDS015C00	7440-22-4	Silver	mg/kg	0.02	UJ	10,15
LWG0109B026SDS015C00	7440-22-4	Silver	mg/kg	0.02	UJ	10

Notes:

[a] Rejected data are not included in this summary.

[b] Qualifiers and data qualifier reason codes are defined in Table X-1.

Table E-12. Qualified Data for Butyltin Compounds in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R004SDS015C11	683-18-1	Dibutyltin dichloride	ug/kg	56	J		5
LWG0103R004SDS015C12	683-18-1	Dibutyltin dichloride	ug/kg	12	J		5
LWG0103R004SDS015C20	683-18-1	Dibutyltin dichloride	ug/kg	32	J		5
LWG0103R004SDS015C30	683-18-1	Dibutyltin dichloride	ug/kg	34	J		5
LWG0103R005SDS015C00	683-18-1	Dibutyltin dichloride	ug/kg	17	J		5
LWG0103R004SDS015C11	1118-46-3	Monobutyltin trichloride	ug/kg	28	J		5
LWG0103R004SDS015C20	1118-46-3	Monobutyltin trichloride	ug/kg	9.6	J	M	5
LWG0103R004SDS015C30	1118-46-3	Monobutyltin trichloride	ug/kg	8.2	J		5

Notes:

[a] Rejected data are not included in this summary.

[b] Qualifiers, laboratory flags, and data qualifier reason codes are defined in Table E-10.

[c] Laboratory flags are only included when they describe quality control exceedances that resulted in qualification of data.

Table E-13. Qualified Data for Volatile Organic Compounds in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0108R001SDS015C00	630-20-6	1,1,1,2-Tetrachloroethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	71-55-6	1,1,1-Trichloroethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	79-34-5	1,1,2,2-Tetrachloroethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	76-13-1	1,1,2-Trichloro-1,2,2-trifluoroethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	79-00-5	1,1,2-Trichloroethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	75-34-3	1,1-Dichloroethane	ug/kg	2	UJ	1,5
LWG0108R001SDS015C00	563-58-6	1,1-Dichloropropene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	87-61-6	1,2,3-Trichlorobenzene	ug/kg	10	UJ	1
LWG0108R001SDS015C00	96-18-4	1,2,3-Trichloropropane	ug/kg	4	UJ	1
LWG0108R001SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	10	UJ	1
LWG0108R001SDS015C00	96-12-8	1,2-Dibromo-3-chloropropane	ug/kg	10	UJ	1
LWG0108R001SDS015C00	95-50-1	1,2-Dichlorobenzene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	107-06-2	1,2-Dichloroethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	78-87-5	1,2-Dichloropropane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	108-67-8	1,3,5-Trimethylbenzene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	541-73-1	1,3-Dichlorobenzene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	142-28-9	1,3-Dichloropropane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	110-57-6	1,4-Dichloro-trans-2-butene	ug/kg	10	UJ	1
LWG0108R001SDS015C00	594-20-7	2,2-Dichloropropane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	110-75-8	2-Chloroethyl vinyl ether	ug/kg	10	UJ	1
LWG0108R001SDS015C00	95-49-8	2-Chlorotoluene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	106-43-4	4-Chlorotoluene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	67-64-1	Acetone	ug/kg	13	J	1
LWG0108R001SDS015C00	107-02-8	Acrolein	ug/kg	100	UJ	1
LWG0108R001SDS015C00	107-13-1	Acrylonitrile	ug/kg	10	UJ	1,5
LWG0108R001SDS015C00	71-43-2	Benzene	ug/kg	0.18	UJ	1,13
LWG0108R001SDS015C00	108-86-1	Bromobenzene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	74-97-5	Bromochloromethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	75-27-4	Bromodichloromethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	74-96-4	Bromoethane	ug/kg	4	UJ	1
LWG0108R001SDS015C00	75-25-2	Bromoform	ug/kg	2	UJ	1
LWG0108R001SDS015C00	74-83-9	Bromomethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	75-15-0	Carbon disulfide	ug/kg	2	UJ	1
LWG0108R001SDS015C00	56-23-5	Carbon tetrachloride	ug/kg	2	UJ	1
LWG0108R001SDS015C00	108-90-7	Chlorobenzene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	124-48-1	Chlorodibromomethane	ug/kg	2	UJ	1,5
LWG0108R001SDS015C00	75-00-3	Chloroethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	67-66-3	Chloroform	ug/kg	2	UJ	1
LWG0108R001SDS015C00	74-87-3	Chloromethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	156-59-2	cis-1,2-Dichloroethene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	10061-01-5	cis-1,3-Dichloropropene	ug/kg	2	UJ	1

Table E-13. Qualified Data for Volatile Organic Compounds in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0108R001SDS015C00	75-71-8	Dichlorodifluoromethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	100-41-4	Ethylbenzene	ug/kg	0.18	UJ	1,13
LWG0108R001SDS015C00	106-93-4	Ethylene dibromide	ug/kg	2	UJ	1
LWG0108R001SDS015C00	98-82-8	Isopropylbenzene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	179601-23-1	m,p-Xylene	ug/kg	0.37	UJ	1,13
LWG0108R001SDS015C00	74-88-4	Methyl iodide	ug/kg	2	UJ	1,5
LWG0108R001SDS015C00	108-10-1	Methyl isobutyl ketone	ug/kg	10	UJ	1
LWG0108R001SDS015C00	591-78-6	Methyl N-butyl ketone	ug/kg	10	UJ	1
LWG0108R001SDS015C00	1634-04-4	Methyl tert-butyl ether	ug/kg	0.18	UJ	1,13
LWG0108R001SDS015C00	74-95-3	Methylene bromide	ug/kg	2	UJ	1
LWG0108R001SDS015C00	75-09-2	Methylene chloride	ug/kg	4	UJ	1
LWG0108R001SDS015C00	78-93-3	Methylethyl ketone	ug/kg	10	UJ	1
LWG0108R001SDS015C00	91-20-3	Naphthalene	ug/kg	10	UJ	1
LWG0108R001SDS015C00	104-51-8	n-Butylbenzene	ug/kg	4	UJ	1
LWG0108R001SDS015C00	103-65-1	n-Propylbenzene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	95-47-6	o-Xylene	ug/kg	0.18	UJ	1,13
LWG0108R001SDS015C00	99-87-6	p-Cymene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	95-63-6	Pseudocumene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	135-98-8	Sec-butylbenzene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	100-42-5	Styrene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	98-06-6	tert-Butylbenzene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	127-18-4	Tetrachloroethene	ug/kg	0.18	UJ	1,5,13
LWG0108R001SDS015C00	108-88-3	Toluene	ug/kg	0.18	UJ	1,5,13
LWG0108R001SDS015C00	156-60-5	trans-1,2-Dichloroethene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	10061-02-6	trans-1,3-Dichloropropene	ug/kg	2	UJ	1
LWG0108R001SDS015C00	79-01-6	Trichloroethene	ug/kg	0.18	UJ	1,13
LWG0108R001SDS015C00	75-69-4	Trichlorofluoromethane	ug/kg	2	UJ	1
LWG0108R001SDS015C00	108-05-4	Vinyl acetate	ug/kg	10	UJ	1
LWG0108R001SDS015C00	75-01-4	Vinyl chloride	ug/kg	0.18	UJ	1,13
LWG0108R001SDS015C00	75-35-4	Vinylidene chloride	ug/kg	0.18	UJ	1,13

Notes:

[a] Rejected data are not included in this summary.

[b] Qualifiers and data qualifier reason codes are defined in Table X-1.

Table E-14. Qualified Data for Semivolatile Organic Compounds in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0102R001SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	20	UJ		10
LWG0103R005SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	120	UJ		10
LWG0103R034SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	20	UJ		10
LWG0104R003SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	20	UJ		10
LWG0104R004SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	19	UJ		10
LWG0105R003SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	19	UJ		10
LWG0106R001SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	20	UJ		10
LWG0106R002SDS015C10	120-82-1	1,2,4-Trichlorobenzene	ug/kg	19	UJ		10
LWG0106R002SDS015C20	120-82-1	1,2,4-Trichlorobenzene	ug/kg	20	UJ		10
LWG0106R002SDS015C31	120-82-1	1,2,4-Trichlorobenzene	ug/kg	20	UJ		10
LWG0106R002SDS015C32	120-82-1	1,2,4-Trichlorobenzene	ug/kg	19	UJ		10
LWG0106R004SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	19	UJ		10
LWG0107R003SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	19	UJ		10
LWG0107R004SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	20	UJ		10
LWG0107R006SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	130	J		10
LWG0108R003SDS015C00	120-82-1	1,2,4-Trichlorobenzene	ug/kg	20	UJ		10
LWG0102R001SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	20	UJ		10
LWG0103R005SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	120	UJ		10
LWG0103R034SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	20	UJ		10
LWG0104R003SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	20	UJ		10
LWG0104R004SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	19	UJ		10
LWG0105R003SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	19	UJ		10
LWG0106R001SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	20	UJ		10
LWG0106R002SDS015C10	106-46-7	1,4-Dichlorobenzene	ug/kg	19	UJ		10
LWG0106R002SDS015C20	106-46-7	1,4-Dichlorobenzene	ug/kg	20	UJ		10
LWG0106R002SDS015C31	106-46-7	1,4-Dichlorobenzene	ug/kg	20	UJ		10
LWG0106R002SDS015C32	106-46-7	1,4-Dichlorobenzene	ug/kg	19	UJ		10
LWG0106R004SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	19	UJ		10
LWG0107R003SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	19	UJ		10
LWG0107R004SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	20	UJ		10
LWG0107R006SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	27	J		10
LWG0108R003SDS015C00	106-46-7	1,4-Dichlorobenzene	ug/kg	20	UJ		10
LWG0103R040SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	190	UJ		5
LWG0103R041SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	200	UJ		5
LWG0105R040SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	2300	UJ		5
LWG0105R041SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	200	UJ		5
LWG0106B022SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	190	UJ		5
LWG0106B025SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	980	UJ		5
LWG0106B026SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	190	UJ		5
LWG0106B029SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	190	UJ		5
LWG0106B030SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	190	UJ		5
LWG0106R040SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	200	UJ		5
LWG0107B022SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	200	UJ		5
LWG0107R030SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	200	UJ		5
LWG0107R040SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	200	UJ		5
LWG0108R040SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	200	UJ		5

Table E-14. Qualified Data for Semivolatile Organic Compounds in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0108R041SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	200	UJ		5
LWG0109B027SDS015C10	51-28-5	2,4-Dinitrophenol	ug/kg	200	UJ		5
LWG0109B027SDS015C20	51-28-5	2,4-Dinitrophenol	ug/kg	190	UJ		5
LWG0109B027SDS015C31	51-28-5	2,4-Dinitrophenol	ug/kg	190	UJ		5
LWG0109B027SDS015C32	51-28-5	2,4-Dinitrophenol	ug/kg	200	UJ		5
LWG0109B028SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	190	UJ		5
LWG0109R040SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	200	UJ		5
LWG0109R041SDS015C00	51-28-5	2,4-Dinitrophenol	ug/kg	190	UJ		5
LWG0102R001SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	98	UJ		10
LWG0103R005SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	590	UJ		10
LWG0103R034SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	98	UJ		10
LWG0104R003SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	98	UJ		10
LWG0104R004SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	97	UJ		10
LWG0105R003SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	96	UJ		10
LWG0106R001SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	100	UJ		10
LWG0106R002SDS015C10	121-14-2	2,4-Dinitrotoluene	ug/kg	97	UJ		10
LWG0106R002SDS015C20	121-14-2	2,4-Dinitrotoluene	ug/kg	98	UJ		10
LWG0106R002SDS015C31	121-14-2	2,4-Dinitrotoluene	ug/kg	98	UJ		10
LWG0106R002SDS015C32	121-14-2	2,4-Dinitrotoluene	ug/kg	97	UJ		10
LWG0106R004SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	97	UJ		10
LWG0107R003SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	97	UJ		10
LWG0107R004SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	98	UJ		10
LWG0107R006SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	96	UJ		10
LWG0108R001SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	300	UJ		10
LWG0108R003SDS015C00	121-14-2	2,4-Dinitrotoluene	ug/kg	99	UJ		10
LWG0102R001SDS015C00	95-57-8	2-Chlorophenol	ug/kg	20	UJ		10
LWG0103R005SDS015C00	95-57-8	2-Chlorophenol	ug/kg	120	UJ		10
LWG0103R034SDS015C00	95-57-8	2-Chlorophenol	ug/kg	20	UJ		10
LWG0104R003SDS015C00	95-57-8	2-Chlorophenol	ug/kg	20	UJ		10
LWG0104R004SDS015C00	95-57-8	2-Chlorophenol	ug/kg	19	UJ		10
LWG0105R003SDS015C00	95-57-8	2-Chlorophenol	ug/kg	19	UJ		10
LWG0106R001SDS015C00	95-57-8	2-Chlorophenol	ug/kg	20	UJ		10
LWG0106R002SDS015C10	95-57-8	2-Chlorophenol	ug/kg	19	UJ		10
LWG0106R002SDS015C20	95-57-8	2-Chlorophenol	ug/kg	20	UJ		10
LWG0106R002SDS015C31	95-57-8	2-Chlorophenol	ug/kg	20	UJ		10
LWG0106R002SDS015C32	95-57-8	2-Chlorophenol	ug/kg	19	UJ		10
LWG0106R004SDS015C00	95-57-8	2-Chlorophenol	ug/kg	19	UJ		10
LWG0107R003SDS015C00	95-57-8	2-Chlorophenol	ug/kg	19	UJ		10
LWG0107R004SDS015C00	95-57-8	2-Chlorophenol	ug/kg	20	UJ		10
LWG0107R006SDS015C00	95-57-8	2-Chlorophenol	ug/kg	19	UJ		10
LWG0108R001SDS015C00	95-57-8	2-Chlorophenol	ug/kg	59	UJ		10
LWG0108R003SDS015C00	95-57-8	2-Chlorophenol	ug/kg	20	UJ		10
LWG0103B030SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	97	UJ		5
LWG0103B031SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	96	UJ		5
LWG0103B033SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	96	UJ		5
LWG0103R004SDS015C11	91-94-1	3,3'-Dichlorobenzidine	ug/kg	96	UJ		5

Table E-14. Qualified Data for Semivolatile Organic Compounds in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R004SDS015C12	91-94-1	3,3'-Dichlorobenzidine	ug/kg	96	UJ		5
LWG0103R004SDS015C20	91-94-1	3,3'-Dichlorobenzidine	ug/kg	98	UJ		5
LWG0103R004SDS015C30	91-94-1	3,3'-Dichlorobenzidine	ug/kg	98	UJ		5
LWG0104B023SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	98	UJ		5
LWG0104B024SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	96	UJ		5
LWG0104R002SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	540	UJ		5
LWG0105B018SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	94	UJ		5
LWG0105B019SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	97	UJ		5
LWG0105R001SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	98	UJ		5
LWG0105R020SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	98	UJ		5
LWG0106R031SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	98	UJ		5
LWG0107B024SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	95	UJ		5
LWG0108B032SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	95	UJ		5
LWG0109B024SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	97	UJ		5
LWG0109B026SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	96	UJ		5
LWG0109R001SDS015C10	91-94-1	3,3'-Dichlorobenzidine	ug/kg	390	UJ		5
LWG0109R001SDS015C20	91-94-1	3,3'-Dichlorobenzidine	ug/kg	99	UJ		5
LWG0109R001SDS015C31	91-94-1	3,3'-Dichlorobenzidine	ug/kg	390	UJ		5
LWG0109R001SDS015C32	91-94-1	3,3'-Dichlorobenzidine	ug/kg	400	UJ		5
LWG0109R002SDS015C00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	380	UJ		5
LWG0103R040SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	190	UJ		5
LWG0103R041SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	200	UJ		5
LWG0105R040SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	2300	UJ		5
LWG0105R041SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	200	UJ		5
LWG0106B022SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	190	UJ		5
LWG0106B025SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	980	UJ		5
LWG0106B026SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	190	UJ		5
LWG0106B029SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	190	UJ		5
LWG0106B030SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	190	UJ		5
LWG0106R040SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	200	UJ		5
LWG0107B022SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	200	UJ		5
LWG0107R030SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	200	UJ		5
LWG0107R040SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	200	UJ		5
LWG0108R040SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	200	UJ		5
LWG0108R041SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	200	UJ		5
LWG0109B027SDS015C10	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	200	UJ		5
LWG0109B027SDS015C20	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	190	UJ		5
LWG0109B027SDS015C31	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	190	UJ		5
LWG0109B027SDS015C32	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	200	UJ		5
LWG0109B028SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	190	UJ		5
LWG0109R040SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	200	UJ		5
LWG0109R041SDS015C00	534-52-1	4,6-Dinitro-2-methylphenol	ug/kg	190	UJ		5
LWG0102R001SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	39	UJ		10
LWG0103R005SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	240	UJ		10
LWG0103R034SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	39	UJ		10
LWG0104R003SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	39	UJ		10

Table E-14. Qualified Data for Semivolatile Organic Compounds in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0104R004SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	39	UJ		10
LWG0105R003SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	39	UJ		10
LWG0106R001SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	40	UJ		10
LWG0106R002SDS015C10	59-50-7	4-Chloro-3-methylphenol	ug/kg	39	UJ		10
LWG0106R002SDS015C20	59-50-7	4-Chloro-3-methylphenol	ug/kg	39	UJ		10
LWG0106R002SDS015C31	59-50-7	4-Chloro-3-methylphenol	ug/kg	39	UJ		10
LWG0106R002SDS015C32	59-50-7	4-Chloro-3-methylphenol	ug/kg	39	UJ		10
LWG0106R004SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	39	UJ		10
LWG0107R003SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	39	UJ		10
LWG0107R004SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	39	UJ		10
LWG0107R006SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	38	UJ		10
LWG0108R001SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	120	UJ		10
LWG0108R003SDS015C00	59-50-7	4-Chloro-3-methylphenol	ug/kg	40	UJ		10
LWG0104R002SDS015C00	100-01-6	4-Nitroaniline	ug/kg	540	UJ		5
LWG0102R001SDS015C00	100-02-7	4-Nitrophenol	ug/kg	98	UJ		10
LWG0103B030SDS015C00	100-02-7	4-Nitrophenol	ug/kg	97	UJ		5
LWG0103B031SDS015C00	100-02-7	4-Nitrophenol	ug/kg	96	UJ		5
LWG0103B033SDS015C00	100-02-7	4-Nitrophenol	ug/kg	96	UJ		5
LWG0103R004SDS015C11	100-02-7	4-Nitrophenol	ug/kg	96	UJ		5
LWG0103R004SDS015C12	100-02-7	4-Nitrophenol	ug/kg	96	UJ		5
LWG0103R004SDS015C20	100-02-7	4-Nitrophenol	ug/kg	98	UJ		5
LWG0103R004SDS015C30	100-02-7	4-Nitrophenol	ug/kg	98	UJ		5
LWG0103R005SDS015C00	100-02-7	4-Nitrophenol	ug/kg	590	UJ		10
LWG0103R034SDS015C00	100-02-7	4-Nitrophenol	ug/kg	98	UJ		10
LWG0104B023SDS015C00	100-02-7	4-Nitrophenol	ug/kg	98	UJ		5
LWG0104B024SDS015C00	100-02-7	4-Nitrophenol	ug/kg	96	UJ		5
LWG0104R002SDS015C00	100-02-7	4-Nitrophenol	ug/kg	540	UJ		5
LWG0104R003SDS015C00	100-02-7	4-Nitrophenol	ug/kg	98	UJ		10
LWG0104R004SDS015C00	100-02-7	4-Nitrophenol	ug/kg	97	UJ		10
LWG0105B018SDS015C00	100-02-7	4-Nitrophenol	ug/kg	94	UJ		5
LWG0105B019SDS015C00	100-02-7	4-Nitrophenol	ug/kg	97	UJ		5
LWG0105R001SDS015C00	100-02-7	4-Nitrophenol	ug/kg	98	UJ		5
LWG0105R003SDS015C00	100-02-7	4-Nitrophenol	ug/kg	96	UJ		10
LWG0105R020SDS015C00	100-02-7	4-Nitrophenol	ug/kg	98	UJ		5
LWG0106R001SDS015C00	100-02-7	4-Nitrophenol	ug/kg	100	UJ		10
LWG0106R002SDS015C10	100-02-7	4-Nitrophenol	ug/kg	97	UJ		10
LWG0106R002SDS015C20	100-02-7	4-Nitrophenol	ug/kg	98	UJ		10
LWG0106R002SDS015C31	100-02-7	4-Nitrophenol	ug/kg	98	UJ		10
LWG0106R002SDS015C32	100-02-7	4-Nitrophenol	ug/kg	97	UJ		10
LWG0106R004SDS015C00	100-02-7	4-Nitrophenol	ug/kg	97	UJ		10
LWG0106R031SDS015C00	100-02-7	4-Nitrophenol	ug/kg	98	UJ		5
LWG0107B024SDS015C00	100-02-7	4-Nitrophenol	ug/kg	95	UJ		5
LWG0107R003SDS015C00	100-02-7	4-Nitrophenol	ug/kg	97	UJ		10
LWG0107R004SDS015C00	100-02-7	4-Nitrophenol	ug/kg	98	UJ		10
LWG0107R006SDS015C00	100-02-7	4-Nitrophenol	ug/kg	96	UJ		10
LWG0108B032SDS015C00	100-02-7	4-Nitrophenol	ug/kg	95	UJ		5

Table E-14. Qualified Data for Semivolatile Organic Compounds in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0108R001SDS015C00	100-02-7	4-Nitrophenol	ug/kg	300	UJ		10
LWG0108R003SDS015C00	100-02-7	4-Nitrophenol	ug/kg	99	UJ		10
LWG0109B024SDS015C00	100-02-7	4-Nitrophenol	ug/kg	97	UJ		5
LWG0109B026SDS015C00	100-02-7	4-Nitrophenol	ug/kg	96	UJ		5
LWG0102R001SDS015C00	83-32-9	Acenaphthene	ug/kg	42	J		10
LWG0103R005SDS015C00	83-32-9	Acenaphthene	ug/kg	360	J		10
LWG0103R034SDS015C00	83-32-9	Acenaphthene	ug/kg	20	UJ		10
LWG0104R003SDS015C00	83-32-9	Acenaphthene	ug/kg	150	J		10
LWG0104R004SDS015C00	83-32-9	Acenaphthene	ug/kg	47	J		10
LWG0105R003SDS015C00	83-32-9	Acenaphthene	ug/kg	250	J		10
LWG0106R001SDS015C00	83-32-9	Acenaphthene	ug/kg	280	J		10
LWG0106R002SDS015C10	83-32-9	Acenaphthene	ug/kg	33	J		10
LWG0106R002SDS015C20	83-32-9	Acenaphthene	ug/kg	48	J		10
LWG0106R002SDS015C31	83-32-9	Acenaphthene	ug/kg	41	J		10
LWG0106R002SDS015C32	83-32-9	Acenaphthene	ug/kg	21	J		10
LWG0106R004SDS015C00	83-32-9	Acenaphthene	ug/kg	170	J		10
LWG0107R003SDS015C00	83-32-9	Acenaphthene	ug/kg	19	UJ		10
LWG0107R004SDS015C00	83-32-9	Acenaphthene	ug/kg	130	J		10
LWG0107R006SDS015C00	83-32-9	Acenaphthene	ug/kg	19	UJ		10
LWG0108R001SDS015C00	83-32-9	Acenaphthene	ug/kg	59	UJ		10
LWG0108R003SDS015C00	83-32-9	Acenaphthene	ug/kg	20	UJ		10
LWG0103B030SDS015C00	56-55-3	Benz(a)anthracene	ug/kg	6.2	J		13
LWG0103B030SDS015C00	50-32-8	Benzo(a)pyrene	ug/kg	7.9	J		13
LWG0103R004SDS015C11	50-32-8	Benzo(a)pyrene	ug/kg	170	J		19
LWG0103R004SDS015C12	50-32-8	Benzo(a)pyrene	ug/kg	110	J		19
LWG0105R020SDS015C00	50-32-8	Benzo(a)pyrene	ug/kg	950	J		19
LWG0106R031SDS015C00	50-32-8	Benzo(a)pyrene	ug/kg	280	J		19
LWG0103B030SDS015C00	205-99-2	Benzo(b)fluoranthene	ug/kg	10	J		13
LWG0103R004SDS015C11	205-99-2	Benzo(b)fluoranthene	ug/kg	200	J		19
LWG0103R004SDS015C12	205-99-2	Benzo(b)fluoranthene	ug/kg	160	J		19
LWG0106R031SDS015C00	205-99-2	Benzo(b)fluoranthene	ug/kg	550	J		19
LWG0103B030SDS015C00	191-24-2	Benzo(g,h,i)perylene	ug/kg	23	J		13
LWG0103R004SDS015C11	191-24-2	Benzo(g,h,i)perylene	ug/kg	36	J		19
LWG0103R004SDS015C12	191-24-2	Benzo(g,h,i)perylene	ug/kg	25	J		19
LWG0105R020SDS015C00	191-24-2	Benzo(g,h,i)perylene	ug/kg	150	J		19
LWG0106R001SDS015C00	191-24-2	Benzo(g,h,i)perylene	ug/kg	640	J		19
LWG0106R031SDS015C00	191-24-2	Benzo(g,h,i)perylene	ug/kg	24	J		19
LWG0103B030SDS015C00	207-08-9	Benzo(k)fluoranthene	ug/kg	11	J		13
LWG0103R004SDS015C11	207-08-9	Benzo(k)fluoranthene	ug/kg	230	J		19
LWG0103R004SDS015C12	207-08-9	Benzo(k)fluoranthene	ug/kg	140	J		19
LWG0103R034SDS015C00	207-08-9	Benzo(k)fluoranthene	ug/kg	11	J		10
LWG0105R020SDS015C00	207-08-9	Benzo(k)fluoranthene	ug/kg	1300	J		19
LWG0106R031SDS015C00	207-08-9	Benzo(k)fluoranthene	ug/kg	540	J		19
LWG0103R041SDS015C00	65-85-0	Benzoic acid	ug/kg	200	UJ		5
LWG0105R040SDS015C00	65-85-0	Benzoic acid	ug/kg	2300	UJ		5
LWG0105R041SDS015C00	65-85-0	Benzoic acid	ug/kg	200	UJ		5

Table E-14. Qualified Data for Semivolatile Organic Compounds in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0106B022SDS015C00	65-85-0	Benzoic acid	ug/kg	190	UJ		5
LWG0106B025SDS015C00	65-85-0	Benzoic acid	ug/kg	980	UJ		5
LWG0106B026SDS015C00	65-85-0	Benzoic acid	ug/kg	190	UJ		5
LWG0106B029SDS015C00	65-85-0	Benzoic acid	ug/kg	190	UJ		5
LWG0106B030SDS015C00	65-85-0	Benzoic acid	ug/kg	190	UJ		5
LWG0106R040SDS015C00	65-85-0	Benzoic acid	ug/kg	260	J		5
LWG0107B022SDS015C00	65-85-0	Benzoic acid	ug/kg	200	UJ		5
LWG0107R040SDS015C00	65-85-0	Benzoic acid	ug/kg	200	UJ		5
LWG0108R040SDS015C00	65-85-0	Benzoic acid	ug/kg	220	J	M	5
LWG0108R041SDS015C00	65-85-0	Benzoic acid	ug/kg	200	UJ		5
LWG0109B027SDS015C10	65-85-0	Benzoic acid	ug/kg	200	UJ		5
LWG0109B027SDS015C20	65-85-0	Benzoic acid	ug/kg	190	UJ		5
LWG0109B027SDS015C31	65-85-0	Benzoic acid	ug/kg	190	UJ		5
LWG0109B027SDS015C32	65-85-0	Benzoic acid	ug/kg	200	UJ		5
LWG0109B028SDS015C00	65-85-0	Benzoic acid	ug/kg	190	UJ		5
LWG0109R040SDS015C00	65-85-0	Benzoic acid	ug/kg	200	UJ		5
LWG0109R041SDS015C00	65-85-0	Benzoic acid	ug/kg	220	J		5
LWG0102R015SDS015C00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	130	U		7
LWG0103R001SDS015C00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	94	U		7
LWG0103R002SDS015C00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	130	U		7
LWG0103R003SDS015C10	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	97	U		7
LWG0103R003SDS015C20	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	60	U		7
LWG0103R003SDS015C31	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	48	U		7
LWG0103R003SDS015C32	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	38	U		7
LWG0103R004SDS015C30	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	19000	U		7
LWG0103R032SDS015C00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	96	U		7
LWG0104R002SDS015C00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	600	UJ		5,7
LWG0105R001SDS015C00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	62	UJ		5,7
LWG0105R020SDS015C00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	200	UJ		5,7
LWG0106R031SDS015C00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	130	J		5
LWG0108R002SDS015C00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	U		7
LWG0109R001SDS015C32	86-74-8	Carbazole	ug/kg	85	J		13
LWG0109R002SDS015C00	86-74-8	Carbazole	ug/kg	77	J		13
LWG0103B030SDS015C00	218-01-9	Chrysene	ug/kg	9.1	J		13
LWG0103R034SDS015C00	218-01-9	Chrysene	ug/kg	10	J		10
LWG0102R015SDS015C00	53-70-3	Dibenz(a,h)anthracene	ug/kg	60	J	M	19
LWG0103R002SDS015C00	53-70-3	Dibenz(a,h)anthracene	ug/kg	60	J	M	19
LWG0103R003SDS015C10	53-70-3	Dibenz(a,h)anthracene	ug/kg	25	J	M	19
LWG0103R003SDS015C32	53-70-3	Dibenz(a,h)anthracene	ug/kg	17	J	M	13
LWG0103R004SDS015C11	53-70-3	Dibenz(a,h)anthracene	ug/kg	46	J	M	19
LWG0103R004SDS015C12	53-70-3	Dibenz(a,h)anthracene	ug/kg	34	J	M	19
LWG0104R002SDS015C00	53-70-3	Dibenz(a,h)anthracene	ug/kg	3700	J		19
LWG0105B018SDS015C00	53-70-3	Dibenz(a,h)anthracene	ug/kg	26	J	M	19
LWG0105R020SDS015C00	53-70-3	Dibenz(a,h)anthracene	ug/kg	37	J		19
LWG0106R001SDS015C00	53-70-3	Dibenz(a,h)anthracene	ug/kg	300	J		19
LWG0106R031SDS015C00	53-70-3	Dibenz(a,h)anthracene	ug/kg	45	J	M	19

Table E-14. Qualified Data for Semivolatile Organic Compounds in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0109R001SDS015C10	53-70-3	Dibenz(a,h)anthracene	ug/kg	150	J	M	13
LWG0109R002SDS015C00	53-70-3	Dibenz(a,h)anthracene	ug/kg	130	J	M	13
LWG0109R001SDS015C31	132-64-9	Dibenzofuran	ug/kg	56	J		13
LWG0109R001SDS015C32	132-64-9	Dibenzofuran	ug/kg	52	J		13
LWG0109R002SDS015C00	132-64-9	Dibenzofuran	ug/kg	31	J		13
LWG0102R001SDS015C00	84-74-2	Dibutyl phthalate	ug/kg	29	U	B	7
LWG0105R003SDS015C00	84-74-2	Dibutyl phthalate	ug/kg	50	U	B	7
LWG0106R001SDS015C00	84-74-2	Dibutyl phthalate	ug/kg	26	U	B	7
LWG0107R003SDS015C00	84-74-2	Dibutyl phthalate	ug/kg	22	U	B	7
LWG0108R003SDS015C00	84-74-2	Dibutyl phthalate	ug/kg	27	U	B	7
LWG0102R001SDS015C00	206-44-0	Fluoranthene	ug/kg	550	J		10
LWG0103R040SDS015C00	77-47-4	Hexachlorocyclopentadiene	ug/kg	97	UJ		5
LWG0104R004SDS015C00	77-47-4	Hexachlorocyclopentadiene	ug/kg	97	UJ		5
LWG0105R003SDS015C00	77-47-4	Hexachlorocyclopentadiene	ug/kg	96	UJ		5
LWG0106R001SDS015C00	77-47-4	Hexachlorocyclopentadiene	ug/kg	100	UJ		5
LWG0106R002SDS015C20	77-47-4	Hexachlorocyclopentadiene	ug/kg	98	UJ		5
LWG0107R003SDS015C00	77-47-4	Hexachlorocyclopentadiene	ug/kg	97	UJ		5
LWG0107R030SDS015C00	77-47-4	Hexachlorocyclopentadiene	ug/kg	98	UJ		5
LWG0107R004SDS015C00	67-72-1	Hexachloroethane	ug/kg	2	UJ		19
LWG0103B030SDS015C00	193-39-5	Indeno(1,2,3-cd)pyrene	ug/kg	16	J		13
LWG0103R004SDS015C11	193-39-5	Indeno(1,2,3-cd)pyrene	ug/kg	46	J		19
LWG0103R004SDS015C12	193-39-5	Indeno(1,2,3-cd)pyrene	ug/kg	31	J		19
LWG0105R020SDS015C00	193-39-5	Indeno(1,2,3-cd)pyrene	ug/kg	220	J		19
LWG0106R001SDS015C00	193-39-5	Indeno(1,2,3-cd)pyrene	ug/kg	790	J		19
LWG0106R031SDS015C00	193-39-5	Indeno(1,2,3-cd)pyrene	ug/kg	32	J		19
LWG0103R041SDS015C00	98-95-3	Nitrobenzene	ug/kg	20	UJ		5
LWG0105R040SDS015C00	98-95-3	Nitrobenzene	ug/kg	230	UJ		5
LWG0105R041SDS015C00	98-95-3	Nitrobenzene	ug/kg	20	UJ		5
LWG0106R040SDS015C00	98-95-3	Nitrobenzene	ug/kg	20	UJ		5
LWG0107R030SDS015C00	98-95-3	Nitrobenzene	ug/kg	20	UJ		5
LWG0107R040SDS015C00	98-95-3	Nitrobenzene	ug/kg	20	UJ		5
LWG0108R040SDS015C00	98-95-3	Nitrobenzene	ug/kg	30	UJ		5
LWG0108R041SDS015C00	98-95-3	Nitrobenzene	ug/kg	20	UJ		5
LWG0109R040SDS015C00	98-95-3	Nitrobenzene	ug/kg	20	UJ		5
LWG0109R041SDS015C00	98-95-3	Nitrobenzene	ug/kg	19	UJ		5
LWG0102R015SDS015C00	62-75-9	N-Nitrosodimethylamine	ug/kg	290	UJ		5
LWG0103R001SDS015C00	62-75-9	N-Nitrosodimethylamine	ug/kg	290	UJ		5
LWG0103R002SDS015C00	62-75-9	N-Nitrosodimethylamine	ug/kg	290	UJ		5
LWG0103R003SDS015C10	62-75-9	N-Nitrosodimethylamine	ug/kg	290	UJ		5
LWG0103R003SDS015C20	62-75-9	N-Nitrosodimethylamine	ug/kg	97	U		5
LWG0103R003SDS015C31	62-75-9	N-Nitrosodimethylamine	ug/kg	98	UJ		5
LWG0103R003SDS015C32	62-75-9	N-Nitrosodimethylamine	ug/kg	97	UJ		5
LWG0103R032SDS015C00	62-75-9	N-Nitrosodimethylamine	ug/kg	97	UJ		5
LWG0108R002SDS015C00	62-75-9	N-Nitrosodimethylamine	ug/kg	97	UJ		5
LWG0102R001SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		10
LWG0103R005SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	240	UJ		10

Table E-14. Qualified Data for Semivolatile Organic Compounds in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R034SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		10
LWG0103R040SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		5
LWG0104R003SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		10
LWG0104R004SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		10
LWG0105R003SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		10
LWG0106R001SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	40	UJ		10
LWG0106R002SDS015C10	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		10
LWG0106R002SDS015C20	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		10
LWG0106R002SDS015C31	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		10
LWG0106R002SDS015C32	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		10
LWG0106R004SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		10
LWG0107R003SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		10
LWG0107R004SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	39	UJ		10
LWG0107R006SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	38	UJ		10
LWG0108R001SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	120	UJ		10
LWG0108R003SDS015C00	621-64-7	N-Nitrosodipropylamine	ug/kg	40	UJ		10
LWG0102R001SDS015C00	87-86-5	Pentachlorophenol	ug/kg	49	UJ		10
LWG0103R005SDS015C00	87-86-5	Pentachlorophenol	ug/kg	98	UJ		10
LWG0103R034SDS015C00	87-86-5	Pentachlorophenol	ug/kg	2.9	J	MJ	10
LWG0104R003SDS015C00	87-86-5	Pentachlorophenol	ug/kg	49	UJ		10
LWG0104R004SDS015C00	87-86-5	Pentachlorophenol	ug/kg	29	UJ		10
LWG0105R003SDS015C00	87-86-5	Pentachlorophenol	ug/kg	48	UJ		10
LWG0106R001SDS015C00	87-86-5	Pentachlorophenol	ug/kg	50	UJ		10
LWG0106R002SDS015C10	87-86-5	Pentachlorophenol	ug/kg	49	UJ		10
LWG0106R002SDS015C20	87-86-5	Pentachlorophenol	ug/kg	30	UJ		10
LWG0106R002SDS015C31	87-86-5	Pentachlorophenol	ug/kg	30	UJ		10
LWG0106R002SDS015C32	87-86-5	Pentachlorophenol	ug/kg	29	UJ		10
LWG0106R004SDS015C00	87-86-5	Pentachlorophenol	ug/kg	48	UJ		10
LWG0107R003SDS015C00	87-86-5	Pentachlorophenol	ug/kg	29	UJ		10
LWG0107R004SDS015C00	87-86-5	Pentachlorophenol	ug/kg	170	J		10,19
LWG0107R006SDS015C00	87-86-5	Pentachlorophenol	ug/kg	200	J	E	10,20
LWG0108R001SDS015C00	87-86-5	Pentachlorophenol	ug/kg	30	UJ		10
LWG0108R003SDS015C00	87-86-5	Pentachlorophenol	ug/kg	30	UJ		10
LWG0109R001SDS015C10	87-86-5	Pentachlorophenol	ug/kg	250	J		13
LWG0109R001SDS015C31	87-86-5	Pentachlorophenol	ug/kg	220	J		13
LWG0109R001SDS015C32	87-86-5	Pentachlorophenol	ug/kg	150	J		13
LWG0109R002SDS015C00	87-86-5	Pentachlorophenol	ug/kg	98	J	M	13
LWG0102R001SDS015C00	108-95-2	Phenol	ug/kg	39	UJ		10
LWG0103R005SDS015C00	108-95-2	Phenol	ug/kg	460	J		10
LWG0103R034SDS015C00	108-95-2	Phenol	ug/kg	39	UJ		10
LWG0104R003SDS015C00	108-95-2	Phenol	ug/kg	39	UJ		10
LWG0104R004SDS015C00	108-95-2	Phenol	ug/kg	39	UJ		10
LWG0105R003SDS015C00	108-95-2	Phenol	ug/kg	39	UJ		10
LWG0106R001SDS015C00	108-95-2	Phenol	ug/kg	40	UJ		10
LWG0106R002SDS015C10	108-95-2	Phenol	ug/kg	39	UJ		10
LWG0106R002SDS015C20	108-95-2	Phenol	ug/kg	39	UJ		10

Table E-14. Qualified Data for Semivolatile Organic Compounds in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0106R002SDS015C31	108-95-2	Phenol	ug/kg	39	UJ		10
LWG0106R002SDS015C32	108-95-2	Phenol	ug/kg	39	UJ		10
LWG0106R004SDS015C00	108-95-2	Phenol	ug/kg	39	UJ		10
LWG0107R003SDS015C00	108-95-2	Phenol	ug/kg	39	UJ		10
LWG0107R004SDS015C00	108-95-2	Phenol	ug/kg	39	UJ		10
LWG0107R006SDS015C00	108-95-2	Phenol	ug/kg	38	UJ		10
LWG0108R001SDS015C00	108-95-2	Phenol	ug/kg	120	UJ		10
LWG0108R003SDS015C00	108-95-2	Phenol	ug/kg	40	UJ		10
LWG0103R005SDS015C00	129-00-0	Pyrene	ug/kg	11000	J		10
LWG0103R034SDS015C00	129-00-0	Pyrene	ug/kg	20	UJ		10
LWG0104R003SDS015C00	129-00-0	Pyrene	ug/kg	1200	J		10
LWG0104R004SDS015C00	129-00-0	Pyrene	ug/kg	630	J		10
LWG0105R003SDS015C00	129-00-0	Pyrene	ug/kg	2100	J		10
LWG0106R001SDS015C00	129-00-0	Pyrene	ug/kg	2100	J		10
LWG0106R002SDS015C10	129-00-0	Pyrene	ug/kg	240	J		10
LWG0106R002SDS015C20	129-00-0	Pyrene	ug/kg	520	J		10
LWG0106R002SDS015C31	129-00-0	Pyrene	ug/kg	620	J		10
LWG0106R002SDS015C32	129-00-0	Pyrene	ug/kg	640	J		10
LWG0106R004SDS015C00	129-00-0	Pyrene	ug/kg	1600	J		10
LWG0107R003SDS015C00	129-00-0	Pyrene	ug/kg	260	J		10
LWG0107R004SDS015C00	129-00-0	Pyrene	ug/kg	5000	J		10
LWG0107R006SDS015C00	129-00-0	Pyrene	ug/kg	830	J		10
LWG0108R001SDS015C00	129-00-0	Pyrene	ug/kg	600	J		10
LWG0108R003SDS015C00	129-00-0	Pyrene	ug/kg	180	J		10

Notes:

[a] Rejected data are not included in this summary.

[b] Qualifiers, laboratory flags, and data qualifier reason codes are defined in Table X-1.

[c] Laboratory flags are only included when they describe quality control exceedances that resulted in qualification of data.

Table E-15. Qualified Data for Chlorinated Herbicides in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0103B030SDS015C00	93-76-5	2,4,5-T	ug/kg	1.5	UJ	5
LWG0103B031SDS015C00	93-76-5	2,4,5-T	ug/kg	1.6	UJ	5
LWG0103R034SDS015C00	93-76-5	2,4,5-T	ug/kg	4.7	UJ	5
LWG0104B023SDS015C00	93-76-5	2,4,5-T	ug/kg	1.8	UJ	5
LWG0104B024SDS015C00	93-76-5	2,4,5-T	ug/kg	1.6	UJ	5
LWG0104R004SDS015C00	93-76-5	2,4,5-T	ug/kg	2.2	UJ	5
LWG0105B019SDS015C00	93-76-5	2,4,5-T	ug/kg	1.6	UJ	5
LWG0105R003SDS015C00	93-76-5	2,4,5-T	ug/kg	2.9	UJ	5
LWG0106R001SDS015C00	93-76-5	2,4,5-T	ug/kg	1.6	UJ	5
LWG0106R002SDS015C20	93-76-5	2,4,5-T	ug/kg	3	UJ	5
LWG0106R002SDS015C31	93-76-5	2,4,5-T	ug/kg	2.5	UJ	5
LWG0106R002SDS015C32	93-76-5	2,4,5-T	ug/kg	2.2	UJ	5
LWG0106R004SDS015C00	93-76-5	2,4,5-T	ug/kg	2.9	UJ	5
LWG0107R003SDS015C00	93-76-5	2,4,5-T	ug/kg	1.6	UJ	5
LWG0107R004SDS015C00	93-76-5	2,4,5-T	ug/kg	1.5	UJ	5
LWG0107R006SDS015C00	93-76-5	2,4,5-T	ug/kg	32	UJ	5
LWG0108B032SDS015C00	93-76-5	2,4,5-T	ug/kg	9.3	UJ	5
LWG0108R001SDS015C00	93-76-5	2,4,5-T	ug/kg	1.6	UJ	5
LWG0108R003SDS015C00	93-76-5	2,4,5-T	ug/kg	1.5	UJ	5
LWG0109B024SDS015C00	93-76-5	2,4,5-T	ug/kg	1.6	UJ	5
LWG0103B030SDS015C00	94-75-7	2,4-D	ug/kg	6.2	UJ	5
LWG0103B031SDS015C00	94-75-7	2,4-D	ug/kg	6.4	UJ	5
LWG0103B033SDS015C00	94-75-7	2,4-D	ug/kg	7.4	UJ	10
LWG0103R034SDS015C00	94-75-7	2,4-D	ug/kg	6.4	UJ	5
LWG0104B023SDS015C00	94-75-7	2,4-D	ug/kg	6.3	UJ	5
LWG0104B024SDS015C00	94-75-7	2,4-D	ug/kg	6.3	UJ	5
LWG0105B019SDS015C00	94-75-7	2,4-D	ug/kg	6.2	UJ	5
LWG0106B022SDS015C00	94-75-7	2,4-D	ug/kg	6.4	UJ	10
LWG0106B025SDS015C00	94-75-7	2,4-D	ug/kg	6.5	UJ	10
LWG0106B026SDS015C00	94-75-7	2,4-D	ug/kg	6.5	UJ	10
LWG0106B029SDS015C00	94-75-7	2,4-D	ug/kg	6.3	UJ	5,10
LWG0106B030SDS015C00	94-75-7	2,4-D	ug/kg	6.3	UJ	10
LWG0107B022SDS015C00	94-75-7	2,4-D	ug/kg	6.5	UJ	5,10
LWG0107R004SDS015C00	94-75-7	2,4-D	ug/kg	6.2	UJ	5
LWG0107R006SDS015C00	94-75-7	2,4-D	ug/kg	130	UJ	5
LWG0108B032SDS015C00	94-75-7	2,4-D	ug/kg	6.4	UJ	5
LWG0108R001SDS015C00	94-75-7	2,4-D	ug/kg	6.5	UJ	5
LWG0108R003SDS015C00	94-75-7	2,4-D	ug/kg	6.2	UJ	5
LWG0109B024SDS015C00	94-75-7	2,4-D	ug/kg	6.3	UJ	5
LWG0109B027SDS015C10	94-75-7	2,4-D	ug/kg	6.6	UJ	10

Table E-15. Qualified Data for Chlorinated Herbicides in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0109B027SDS015C20	94-75-7	2,4-D	ug/kg	6.4	UJ	10
LWG0109B027SDS015C31	94-75-7	2,4-D	ug/kg	6.2	UJ	10
LWG0109B027SDS015C32	94-75-7	2,4-D	ug/kg	6.2	UJ	10
LWG0109B028SDS015C00	94-75-7	2,4-D	ug/kg	6.3	UJ	5,10
LWG0103B030SDS015C00	75-99-0	Dalapon	ug/kg	15	UJ	5
LWG0103B031SDS015C00	75-99-0	Dalapon	ug/kg	16	UJ	5
LWG0104B023SDS015C00	75-99-0	Dalapon	ug/kg	16	UJ	5
LWG0104B024SDS015C00	75-99-0	Dalapon	ug/kg	16	UJ	5
LWG0105B019SDS015C00	75-99-0	Dalapon	ug/kg	16	UJ	5
LWG0108B032SDS015C00	75-99-0	Dalapon	ug/kg	16	UJ	5
LWG0109B024SDS015C00	75-99-0	Dalapon	ug/kg	16	UJ	5
LWG0103R034SDS015C00	1918-00-9	Dicamba	ug/kg	3.2	UJ	5
LWG0106B022SDS015C00	1918-00-9	Dicamba	ug/kg	3.2	UJ	10
LWG0106B025SDS015C00	1918-00-9	Dicamba	ug/kg	3.3	UJ	10
LWG0106B026SDS015C00	1918-00-9	Dicamba	ug/kg	3.2	UJ	10
LWG0106B029SDS015C00	1918-00-9	Dicamba	ug/kg	3.1	UJ	10
LWG0106B030SDS015C00	1918-00-9	Dicamba	ug/kg	3.1	UJ	10
LWG0107B022SDS015C00	1918-00-9	Dicamba	ug/kg	3.3	UJ	10
LWG0107R004SDS015C00	1918-00-9	Dicamba	ug/kg	3.1	UJ	5
LWG0107R006SDS015C00	1918-00-9	Dicamba	ug/kg	16	UJ	5
LWG0108R001SDS015C00	1918-00-9	Dicamba	ug/kg	3.3	UJ	5
LWG0108R003SDS015C00	1918-00-9	Dicamba	ug/kg	3.1	UJ	5
LWG0109B027SDS015C10	1918-00-9	Dicamba	ug/kg	3.3	UJ	10
LWG0109B027SDS015C20	1918-00-9	Dicamba	ug/kg	3.2	UJ	10
LWG0109B027SDS015C31	1918-00-9	Dicamba	ug/kg	3.1	UJ	10
LWG0109B027SDS015C32	1918-00-9	Dicamba	ug/kg	3.1	UJ	10
LWG0109B028SDS015C00	1918-00-9	Dicamba	ug/kg	3.2	UJ	10
LWG0103B030SDS015C00	120-36-5	Dichloroprop	ug/kg	19	UJ	5
LWG0103B031SDS015C00	120-36-5	Dichloroprop	ug/kg	6.4	UJ	5
LWG0103B033SDS015C00	120-36-5	Dichloroprop	ug/kg	17	UJ	5
LWG0103R005SDS015C00	120-36-5	Dichloroprop	ug/kg	6.4	UJ	5
LWG0103R034SDS015C00	120-36-5	Dichloroprop	ug/kg	6.4	UJ	5
LWG0104B023SDS015C00	120-36-5	Dichloroprop	ug/kg	6.3	UJ	5
LWG0104B024SDS015C00	120-36-5	Dichloroprop	ug/kg	6.3	UJ	5
LWG0104R003SDS015C00	120-36-5	Dichloroprop	ug/kg	6.2	UJ	5
LWG0104R004SDS015C00	120-36-5	Dichloroprop	ug/kg	6.4	UJ	5
LWG0105B018SDS015C00	120-36-5	Dichloroprop	ug/kg	6.4	UJ	5
LWG0105B019SDS015C00	120-36-5	Dichloroprop	ug/kg	6.2	UJ	5
LWG0105R003SDS015C00	120-36-5	Dichloroprop	ug/kg	6.5	UJ	5
LWG0105R040SDS015C00	120-36-5	Dichloroprop	ug/kg	6.5	UJ	5

Table E-15. Qualified Data for Chlorinated Herbicides in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0106B022SDS015C00	120-36-5	Dichloroprop	ug/kg	6.4	UJ	5
LWG0106B025SDS015C00	120-36-5	Dichloroprop	ug/kg	6.5	UJ	5
LWG0106B026SDS015C00	120-36-5	Dichloroprop	ug/kg	6.5	UJ	5
LWG0106B029SDS015C00	120-36-5	Dichloroprop	ug/kg	6.3	UJ	5
LWG0106B030SDS015C00	120-36-5	Dichloroprop	ug/kg	6.3	UJ	5
LWG0106R001SDS015C00	120-36-5	Dichloroprop	ug/kg	6.5	UJ	5
LWG0106R002SDS015C10	120-36-5	Dichloroprop	ug/kg	6.3	UJ	5
LWG0106R002SDS015C20	120-36-5	Dichloroprop	ug/kg	6.3	UJ	5
LWG0106R002SDS015C31	120-36-5	Dichloroprop	ug/kg	6.2	UJ	5
LWG0106R002SDS015C32	120-36-5	Dichloroprop	ug/kg	6.4	UJ	5
LWG0106R004SDS015C00	120-36-5	Dichloroprop	ug/kg	6.2	UJ	5
LWG0106R040SDS015C00	120-36-5	Dichloroprop	ug/kg	6.3	UJ	5
LWG0107B022SDS015C00	120-36-5	Dichloroprop	ug/kg	6.5	UJ	5
LWG0107B023SDS015C00	120-36-5	Dichloroprop	ug/kg	6.2	UJ	5
LWG0107B024SDS015C00	120-36-5	Dichloroprop	ug/kg	6.3	UJ	5
LWG0107R003SDS015C00	120-36-5	Dichloroprop	ug/kg	6.5	UJ	5
LWG0107R004SDS015C00	120-36-5	Dichloroprop	ug/kg	6.2	UJ	5
LWG0107R006SDS015C00	120-36-5	Dichloroprop	ug/kg	130	UJ	5
LWG0108B032SDS015C00	120-36-5	Dichloroprop	ug/kg	6.4	UJ	5
LWG0108R001SDS015C00	120-36-5	Dichloroprop	ug/kg	6.5	UJ	5
LWG0108R003SDS015C00	120-36-5	Dichloroprop	ug/kg	6.2	UJ	5
LWG0108R040SDS015C00	120-36-5	Dichloroprop	ug/kg	6.5	UJ	5
LWG0109B024SDS015C00	120-36-5	Dichloroprop	ug/kg	6.3	UJ	5
LWG0109B026SDS015C00	120-36-5	Dichloroprop	ug/kg	29	UJ	5
LWG0109B027SDS015C10	120-36-5	Dichloroprop	ug/kg	6.6	UJ	5
LWG0109B027SDS015C20	120-36-5	Dichloroprop	ug/kg	6.4	UJ	5
LWG0109B027SDS015C31	120-36-5	Dichloroprop	ug/kg	6.2	UJ	5
LWG0109B027SDS015C32	120-36-5	Dichloroprop	ug/kg	6.2	UJ	5
LWG0109B028SDS015C00	120-36-5	Dichloroprop	ug/kg	6.3	UJ	5
LWG0109R001SDS015C10	120-36-5	Dichloroprop	ug/kg	6.5	UJ	5
LWG0109R001SDS015C20	120-36-5	Dichloroprop	ug/kg	6.6	UJ	5
LWG0109R001SDS015C31	120-36-5	Dichloroprop	ug/kg	6.5	UJ	5
LWG0109R001SDS015C32	120-36-5	Dichloroprop	ug/kg	6.3	UJ	5
LWG0109R002SDS015C00	120-36-5	Dichloroprop	ug/kg	6.2	UJ	5
LWG0103B030SDS015C00	88-85-7	Dinoseb	ug/kg	3.1	UJ	5
LWG0103B031SDS015C00	88-85-7	Dinoseb	ug/kg	3.2	UJ	5
LWG0103R034SDS015C00	88-85-7	Dinoseb	ug/kg	3.2	UJ	5
LWG0104B023SDS015C00	88-85-7	Dinoseb	ug/kg	3.1	UJ	5
LWG0104B024SDS015C00	88-85-7	Dinoseb	ug/kg	3.2	UJ	5
LWG0104R004SDS015C00	88-85-7	Dinoseb	ug/kg	3.2	UJ	5

Table E-15. Qualified Data for Chlorinated Herbicides in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0105B019SDS015C00	88-85-7	Dinoseb	ug/kg	3.1	UJ	5
LWG0105R003SDS015C00	88-85-7	Dinoseb	ug/kg	3.2	UJ	5
LWG0106R001SDS015C00	88-85-7	Dinoseb	ug/kg	3.3	UJ	5
LWG0106R002SDS015C20	88-85-7	Dinoseb	ug/kg	2.9	UJ	5
LWG0106R002SDS015C31	88-85-7	Dinoseb	ug/kg	3.1	UJ	5
LWG0106R002SDS015C32	88-85-7	Dinoseb	ug/kg	3.2	UJ	5
LWG0106R004SDS015C00	88-85-7	Dinoseb	ug/kg	3.1	UJ	5
LWG0107B023SDS015C00	88-85-7	Dinoseb	ug/kg	3.1	UJ	5
LWG0107B024SDS015C00	88-85-7	Dinoseb	ug/kg	3.2	UJ	5
LWG0107R003SDS015C00	88-85-7	Dinoseb	ug/kg	3.2	UJ	5
LWG0107R004SDS015C00	88-85-7	Dinoseb	ug/kg	3.1	UJ	5
LWG0107R006SDS015C00	88-85-7	Dinoseb	ug/kg	20	UJ	5
LWG0108B032SDS015C00	88-85-7	Dinoseb	ug/kg	3.2	UJ	5
LWG0108R001SDS015C00	88-85-7	Dinoseb	ug/kg	3.3	UJ	5
LWG0108R003SDS015C00	88-85-7	Dinoseb	ug/kg	3.1	UJ	5
LWG0109B024SDS015C00	88-85-7	Dinoseb	ug/kg	3.2	UJ	5
LWG0102R001SDS015C00	93-65-2	MCPP	ug/kg	3100	UJ	5
LWG0103B030SDS015C00	93-72-1	Silvex	ug/kg	1.5	UJ	5
LWG0103B031SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0103B033SDS015C00	93-72-1	Silvex	ug/kg	4	UJ	10
LWG0103R034SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0104B023SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0104B024SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0104R004SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0105B019SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0105R003SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0105R040SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0106B022SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	10
LWG0106B025SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	10
LWG0106B026SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	10
LWG0106B029SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5,10
LWG0106B030SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	10
LWG0106R001SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0106R002SDS015C20	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0106R002SDS015C31	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0106R002SDS015C32	93-72-1	Silvex	ug/kg	4.1	UJ	5
LWG0106R004SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0107B022SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5,10
LWG0107B023SDS015C00	93-72-1	Silvex	ug/kg	1.5	UJ	5
LWG0107B024SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5

Table E-15. Qualified Data for Chlorinated Herbicides in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0107R003SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0107R004SDS015C00	93-72-1	Silvex	ug/kg	1.5	UJ	5
LWG0107R006SDS015C00	93-72-1	Silvex	ug/kg	10	UJ	5
LWG0108B032SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0108R001SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0108R003SDS015C00	93-72-1	Silvex	ug/kg	1.5	UJ	5
LWG0109B024SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5
LWG0109B026SDS015C00	93-72-1	Silvex	ug/kg	2.1	UJ	10
LWG0109B027SDS015C10	93-72-1	Silvex	ug/kg	1.7	UJ	10
LWG0109B027SDS015C20	93-72-1	Silvex	ug/kg	1.6	UJ	10
LWG0109B027SDS015C31	93-72-1	Silvex	ug/kg	1.6	UJ	10
LWG0109B027SDS015C32	93-72-1	Silvex	ug/kg	1.5	UJ	10
LWG0109B028SDS015C00	93-72-1	Silvex	ug/kg	1.6	UJ	5,10

Notes:
[a] Rejected data are not included in this summary.
[b] Qualifiers and data qualifier reason codes are defined in Table X-1.

Table E-16. Qualified Data for Pesticides in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0102R015SDS015C00	53-19-0	2,4'-DDD	ug/kg	6.3	UJ		5
LWG0103R002SDS015C00	53-19-0	2,4'-DDD	ug/kg	2.2	UJ		5
LWG0103R004SDS015C11	53-19-0	2,4'-DDD	ug/kg	1.1	UJ		5
LWG0103R004SDS015C12	53-19-0	2,4'-DDD	ug/kg	1.2	UJ		5
LWG0103R005SDS015C00	53-19-0	2,4'-DDD	ug/kg	13	UJ		5
LWG0103R040SDS015C00	53-19-0	2,4'-DDD	ug/kg	6	UJ		5
LWG0104R003SDS015C00	53-19-0	2,4'-DDD	ug/kg	0.95	UJ		5
LWG0105R003SDS015C00	53-19-0	2,4'-DDD	ug/kg	2.3	UJ		5
LWG0105R040SDS015C00	53-19-0	2,4'-DDD	ug/kg	5.9	UJ		5
LWG0106R031SDS015C00	53-19-0	2,4'-DDD	ug/kg	6.1	J		5
LWG0109R001SDS015C10	53-19-0	2,4'-DDD	ug/kg	0.68	UJ		5
LWG0109R001SDS015C20	53-19-0	2,4'-DDD	ug/kg	0.58	UJ		5
LWG0103R005SDS015C00	789-02-6	2,4'-DDT	ug/kg	20	UJ		5
LWG0103R034SDS015C00	789-02-6	2,4'-DDT	ug/kg	0.38	UJ		5
LWG0103R040SDS015C00	789-02-6	2,4'-DDT	ug/kg	3.9	UJ		5
LWG0104R003SDS015C00	789-02-6	2,4'-DDT	ug/kg	0.51	UJ		5
LWG0104R004SDS015C00	789-02-6	2,4'-DDT	ug/kg	0.39	UJ		5
LWG0105R003SDS015C00	789-02-6	2,4'-DDT	ug/kg	0.39	UJ		5
LWG0105R040SDS015C00	789-02-6	2,4'-DDT	ug/kg	16	UJ		5
LWG0106R001SDS015C00	789-02-6	2,4'-DDT	ug/kg	0.88	UJ		5
LWG0106R002SDS015C31	789-02-6	2,4'-DDT	ug/kg	0.39	UJ		5
LWG0106R002SDS015C32	789-02-6	2,4'-DDT	ug/kg	0.39	UJ		5
LWG0106R004SDS015C00	789-02-6	2,4'-DDT	ug/kg	11	UJ		5
LWG0107R004SDS015C00	789-02-6	2,4'-DDT	ug/kg	0.39	UJ		5
LWG0108R001SDS015C00	789-02-6	2,4'-DDT	ug/kg	0.4	UJ		5
LWG0108R003SDS015C00	789-02-6	2,4'-DDT	ug/kg	0.4	UJ		5
LWG0109R001SDS015C10	789-02-6	2,4'-DDT	ug/kg	0.39	UJ		5
LWG0109R001SDS015C20	789-02-6	2,4'-DDT	ug/kg	0.39	UJ		5
LWG0102R015SDS015C00	72-54-8	4,4'-DDD	ug/kg	4.7	UJ		5
LWG0103R002SDS015C00	72-54-8	4,4'-DDD	ug/kg	10	J		5
LWG0103R004SDS015C11	72-54-8	4,4'-DDD	ug/kg	3.1	UJ		5
LWG0103R004SDS015C12	72-54-8	4,4'-DDD	ug/kg	5.3	UJ		5
LWG0103R005SDS015C00	72-54-8	4,4'-DDD	ug/kg	11	UJ		5
LWG0103R034SDS015C00	72-54-8	4,4'-DDD	ug/kg	0.38	UJ		5
LWG0103R040SDS015C00	72-54-8	4,4'-DDD	ug/kg	16	J		5
LWG0104R002SDS015C00	72-54-8	4,4'-DDD	ug/kg	3.9	UJ		5
LWG0104R003SDS015C00	72-54-8	4,4'-DDD	ug/kg	3.3	UJ		5
LWG0105R003SDS015C00	72-54-8	4,4'-DDD	ug/kg	4	UJ		5
LWG0105R020SDS015C00	72-54-8	4,4'-DDD	ug/kg	7.6	J		5
LWG0105R040SDS015C00	72-54-8	4,4'-DDD	ug/kg	26	UJ		5
LWG0106R002SDS015C31	72-54-8	4,4'-DDD	ug/kg	2.6	UJ		5
LWG0106R002SDS015C32	72-54-8	4,4'-DDD	ug/kg	3.1	UJ		5
LWG0106R031SDS015C00	72-54-8	4,4'-DDD	ug/kg	22	J		5
LWG0107R004SDS015C00	72-54-8	4,4'-DDD	ug/kg	0.81	UJ		5
LWG0108R003SDS015C00	72-54-8	4,4'-DDD	ug/kg	1.8	UJ		5
LWG0109R001SDS015C20	72-54-8	4,4'-DDD	ug/kg	1.6	UJ		5
LWG0102R015SDS015C00	72-55-9	4,4'-DDE	ug/kg	15	UJ		5
LWG0103R002SDS015C00	72-55-9	4,4'-DDE	ug/kg	4.8	J		5
LWG0103R004SDS015C11	72-55-9	4,4'-DDE	ug/kg	4.8	UJ		5

Table E-16. Qualified Data for Pesticides in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R004SDS015C12	72-55-9	4,4'-DDE	ug/kg	6.3	UJ		5
LWG0103R040SDS015C00	72-55-9	4,4'-DDE	ug/kg	7.8	UJ		5
LWG0105R040SDS015C00	72-55-9	4,4'-DDE	ug/kg	10	UJ		5
LWG0109R001SDS015C10	72-55-9	4,4'-DDE	ug/kg	1.8	UJ		5
LWG0109R001SDS015C20	72-55-9	4,4'-DDE	ug/kg	2	UJ		5
LWG0104R004SDS015C00	50-29-3	4,4'-DDT	ug/kg	2.1	UJ		5
LWG0106R004SDS015C00	50-29-3	4,4'-DDT	ug/kg	15	J	P	5
LWG0108R001SDS015C00	50-29-3	4,4'-DDT	ug/kg	2.9	UJ		5
LWG0103B033SDS015C00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	0.19	UJ		5
LWG0104B023SDS015C00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	0.19	UJ		5
LWG0104B024SDS015C00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	0.19	UJ		5
LWG0104B024SDS015C00	5103-71-9	cis-Chlordane	ug/kg	3.2	J		23
LWG0102R015SDS015C00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	0.19	UJ		5
LWG0103R002SDS015C00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	0.2	UJ		5
LWG0103R004SDS015C11	319-86-8	delta-Hexachlorocyclohexane	ug/kg	0.2	UJ		5
LWG0103R004SDS015C12	319-86-8	delta-Hexachlorocyclohexane	ug/kg	0.2	UJ		5
LWG0103R040SDS015C00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	2	UJ		5
LWG0104R002SDS015C00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	2	UJ		5
LWG0105B018SDS015C00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	0.19	UJ		5
LWG0105R040SDS015C00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	0.19	UJ		5
LWG0106R031SDS015C00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	0.2	UJ		5
LWG0107B023SDS015C00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	0.19	UJ		5
LWG0107B024SDS015C00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	0.19	UJ		5
LWG0107R003SDS015C00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	65	UJ		5
LWG0109R001SDS015C10	319-86-8	delta-Hexachlorocyclohexane	ug/kg	0.19	UJ		5
LWG0109R001SDS015C20	319-86-8	delta-Hexachlorocyclohexane	ug/kg	0.2	UJ		5
LWG0102R015SDS015C00	1031-07-8	Endosulfan sulfate	ug/kg	0.39	UJ		5
LWG0103R002SDS015C00	1031-07-8	Endosulfan sulfate	ug/kg	0.39	UJ		5
LWG0103R004SDS015C11	1031-07-8	Endosulfan sulfate	ug/kg	0.39	UJ		5
LWG0103R004SDS015C12	1031-07-8	Endosulfan sulfate	ug/kg	0.39	UJ		5
LWG0104R002SDS015C00	1031-07-8	Endosulfan sulfate	ug/kg	23	UJ		5
LWG0104R004SDS015C00	1031-07-8	Endosulfan sulfate	ug/kg	0.39	UJ		5
LWG0106R001SDS015C00	1031-07-8	Endosulfan sulfate	ug/kg	0.39	UJ		5
LWG0106R004SDS015C00	1031-07-8	Endosulfan sulfate	ug/kg	5.8	UJ		5
LWG0106R031SDS015C00	1031-07-8	Endosulfan sulfate	ug/kg	5.8	UJ		5
LWG0108R001SDS015C00	1031-07-8	Endosulfan sulfate	ug/kg	0.4	UJ		5
LWG0107R006SDS015C00	72-20-8	Endrin	ug/kg	110	UJ		5
LWG0102R015SDS015C00	53494-70-5	Endrin ketone	ug/kg	7.5	UJ		5
LWG0103R002SDS015C00	53494-70-5	Endrin ketone	ug/kg	0.73	UJ		5
LWG0103R003SDS015C10	53494-70-5	Endrin ketone	ug/kg	0.68	UJ		5
LWG0103R003SDS015C20	53494-70-5	Endrin ketone	ug/kg	0.78	UJ		5
LWG0103R003SDS015C31	53494-70-5	Endrin ketone	ug/kg	1.3	UJ		5
LWG0103R004SDS015C11	53494-70-5	Endrin ketone	ug/kg	1.8	UJ		5
LWG0103R004SDS015C12	53494-70-5	Endrin ketone	ug/kg	11	UJ		5
LWG0103R004SDS015C20	53494-70-5	Endrin ketone	ug/kg	0.39	UJ		5
LWG0103R004SDS015C30	53494-70-5	Endrin ketone	ug/kg	0.39	UJ		5
LWG0103R032SDS015C00	53494-70-5	Endrin ketone	ug/kg	0.39	UJ		5
LWG0104R002SDS015C00	53494-70-5	Endrin ketone	ug/kg	3.9	UJ		5
LWG0105R020SDS015C00	53494-70-5	Endrin ketone	ug/kg	0.39	UJ		5

Table E-16. Qualified Data for Pesticides in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0106R031SDS015C00	53494-70-5	Endrin ketone	ug/kg	1	UJ		5
LWG0103B033SDS015C00	87-68-3	Hexachlorobutadiene	ug/kg	0.24	UJ		5
LWG0104B023SDS015C00	87-68-3	Hexachlorobutadiene	ug/kg	0.31	UJ		5
LWG0104B024SDS015C00	87-68-3	Hexachlorobutadiene	ug/kg	0.34	UJ		5
LWG0104R002SDS015C00	87-68-3	Hexachlorobutadiene	ug/kg	2	UJ		5
LWG0104R004SDS015C00	87-68-3	Hexachlorobutadiene	ug/kg	0.34	UJ		5
LWG0105B018SDS015C00	87-68-3	Hexachlorobutadiene	ug/kg	0.37	UJ		5
LWG0106R001SDS015C00	87-68-3	Hexachlorobutadiene	ug/kg	0.2	UJ		5
LWG0106R004SDS015C00	87-68-3	Hexachlorobutadiene	ug/kg	1.2	UJ		5
LWG0107B023SDS015C00	87-68-3	Hexachlorobutadiene	ug/kg	0.32	UJ		5
LWG0107B024SDS015C00	87-68-3	Hexachlorobutadiene	ug/kg	1.1	UJ		5
LWG0108R001SDS015C00	87-68-3	Hexachlorobutadiene	ug/kg	0.29	UJ		5

Notes:
[a] Rejected data are not included in this summary.
[b] Qualifiers, laboratory flags, and data qualifier reason codes are defined in Table X-1
[c] Laboratory flags are only included when they describe quality control exceedances that resulted in qualification of data

Table E-17. Qualified Data for PCB Aroclors in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0106R001SDS015C00	12672-29-6	Aroclor 1248	ug/kg	13	J		13
LWG0108R041SDS015C00	12672-29-6	Aroclor 1248	ug/kg	77	J		13
LWG0106R001SDS015C00	11097-69-1	Aroclor 1254	ug/kg	14	J		13
LWG0109R001SDS015C32	11097-69-1	Aroclor 1254	ug/kg	58	J		13
LWG0104B023SDS015C00	11096-82-5	Aroclor 1260	ug/kg	3.4	J	J	23
LWG0108B032SDS015C00	11096-82-5	Aroclor 1260	ug/kg	9.9	J		23
LWG0109R001SDS015C32	11096-82-5	Aroclor 1260	ug/kg	94	J		13

Notes:

[a] Rejected data are not included in this summary.

[b] Qualifiers, laboratory flags, and data qualifier reason codes are defined in Table X-1.

[c] Laboratory flags are only included when they describe quality control exceedances that resulted in qualification of data.

Table E-18. Qualified Data for PCB Congeners in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0102R001SDS015C00	35693-99-3	2,2',5,5'-Tetrachlorobiphenyl	pg/g	35600	J	23
LWG0103R005SDS015C00	35693-99-3	2,2',5,5'-Tetrachlorobiphenyl	pg/g	112000	J	23
LWG0107R006SDS015C00	65510-44-3	2,3',4,4',5'-Pentachlorobiphenyl	pg/g	480	UJ	1
LWG0102R001SDS015C00	31508-00-6	2,3',4,4',5-Pentachlorobiphenyl	pg/g	19600	J	23
LWG0103R005SDS015C00	31508-00-6	2,3',4,4',5-Pentachlorobiphenyl	pg/g	170000	J	23
LWG0102R001SDS015C00	32598-10-0	2,3',4,4'-Tetrachlorobiphenyl	pg/g	39000	J	23
LWG0103R004SDS015C11	16606-02-3	2,4',5-Trichlorobiphenyl	pg/g	35400	J	23
LWG0102R001SDS015C00	PCB012_013	PCB012 & 013	pg/g	70.7	J	23
LWG0103R003SDS015C10	PCB012_013	PCB012 & 013	pg/g	2.15	J	23
LWG0103R004SDS015C11	PCB012_013	PCB012 & 013	pg/g	1230	J	23
LWG0103R005SDS015C00	PCB012_013	PCB012 & 013	pg/g	224	J	23
LWG0106R002SDS015C10	PCB012_013	PCB012 & 013	pg/g	12.1	J	23
LWG0106R002SDS015C20	PCB012_013	PCB012 & 013	pg/g	9.64	J	23
LWG0106R002SDS015C31	PCB012_013	PCB012 & 013	pg/g	8.17	J	23
LWG0106R004SDS015C00	PCB012_013	PCB012 & 013	pg/g	4.85	J	23
LWG0107R006SDS015C00	PCB012_013	PCB012 & 013	pg/g	92.4	J	23
LWG0108R003SDS015C00	PCB012_013	PCB012 & 013	pg/g	6.74	J	23
LWG0109R002SDS015C00	PCB012_013	PCB012 & 013	pg/g	70.6	J	23
LWG0102R001SDS015C00	PCB018_030	PCB018 & 030	pg/g	2300	J	23
LWG0103R003SDS015C10	PCB018_030	PCB018 & 030	pg/g	25.2	J	23
LWG0103R004SDS015C11	PCB018_030	PCB018 & 030	pg/g	35500	J	23
LWG0103R005SDS015C00	PCB018_030	PCB018 & 030	pg/g	4060	J	23
LWG0106R002SDS015C10	PCB018_030	PCB018 & 030	pg/g	87.7	J	23
LWG0106R002SDS015C20	PCB018_030	PCB018 & 030	pg/g	38.8	J	23
LWG0106R002SDS015C31	PCB018_030	PCB018 & 030	pg/g	53	J	23
LWG0106R004SDS015C00	PCB018_030	PCB018 & 030	pg/g	139	J	23
LWG0107R006SDS015C00	PCB018_030	PCB018 & 030	pg/g	2820	J	23
LWG0108R003SDS015C00	PCB018_030	PCB018 & 030	pg/g	94.3	J	23
LWG0109R002SDS015C00	PCB018_030	PCB018 & 030	pg/g	1030	J	23
LWG0102R001SDS015C00	PCB020_028	PCB020 & 028	pg/g	13700	J	23
LWG0103R003SDS015C10	PCB020_028	PCB020 & 028	pg/g	64.9	J	23
LWG0103R004SDS015C11	PCB020_028	PCB020 & 028	pg/g	38200	J	23
LWG0103R005SDS015C00	PCB020_028	PCB020 & 028	pg/g	8790	J	23
LWG0106R002SDS015C10	PCB020_028	PCB020 & 028	pg/g	177	J	23
LWG0106R002SDS015C20	PCB020_028	PCB020 & 028	pg/g	118	J	23
LWG0106R002SDS015C31	PCB020_028	PCB020 & 028	pg/g	125	J	23
LWG0106R004SDS015C00	PCB020_028	PCB020 & 028	pg/g	559	J	23
LWG0107R006SDS015C00	PCB020_028	PCB020 & 028	pg/g	9530	J	23
LWG0108R003SDS015C00	PCB020_028	PCB020 & 028	pg/g	190	J	23
LWG0109R002SDS015C00	PCB020_028	PCB020 & 028	pg/g	1870	J	23
LWG0102R001SDS015C00	PCB021_033	PCB021 & 033	pg/g	818	J	23
LWG0103R003SDS015C10	PCB021_033	PCB021 & 033	pg/g	25.9	J	23
LWG0103R004SDS015C11	PCB021_033	PCB021 & 033	pg/g	24900	J	23
LWG0103R005SDS015C00	PCB021_033	PCB021 & 033	pg/g	3870	J	23
LWG0106R002SDS015C10	PCB021_033	PCB021 & 033	pg/g	71	J	23
LWG0106R002SDS015C20	PCB021_033	PCB021 & 033	pg/g	44.7	J	23
LWG0106R002SDS015C31	PCB021_033	PCB021 & 033	pg/g	44.2	J	23
LWG0106R004SDS015C00	PCB021_033	PCB021 & 033	pg/g	105	J	23
LWG0107R006SDS015C00	PCB021_033	PCB021 & 033	pg/g	1390	J	23

Table E-18. Qualified Data for PCB Congeners in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0108R003SDS015C00	PCB021_033	PCB021 & 033	pg/g	95.2	J	23
LWG0109R002SDS015C00	PCB021_033	PCB021 & 033	pg/g	903	J	23
LWG0102R001SDS015C00	PCB026_029	PCB026 & 029	pg/g	1020	J	23
LWG0103R003SDS015C10	PCB026_029	PCB026 & 029	pg/g	9.8	J	23
LWG0103R004SDS015C11	PCB026_029	PCB026 & 029	pg/g	8320	J	23
LWG0103R005SDS015C00	PCB026_029	PCB026 & 029	pg/g	1760	J	23
LWG0106R002SDS015C10	PCB026_029	PCB026 & 029	pg/g	34.1	J	23
LWG0106R002SDS015C20	PCB026_029	PCB026 & 029	pg/g	21.7	J	23
LWG0106R002SDS015C31	PCB026_029	PCB026 & 029	pg/g	24.6	J	23
LWG0106R004SDS015C00	PCB026_029	PCB026 & 029	pg/g	50.8	J	23
LWG0107R006SDS015C00	PCB026_029	PCB026 & 029	pg/g	745	J	23
LWG0108R003SDS015C00	PCB026_029	PCB026 & 029	pg/g	29.3	J	23
LWG0109R002SDS015C00	PCB026_029	PCB026 & 029	pg/g	366	J	23
LWG0102R001SDS015C00	PCB040_041_071	PCB040 & 041 & 071	pg/g	17800	J	23
LWG0103R003SDS015C10	PCB040_041_071	PCB040 & 041 & 071	pg/g	48	J	23
LWG0103R004SDS015C11	PCB040_041_071	PCB040 & 041 & 071	pg/g	19100	J	23
LWG0103R005SDS015C00	PCB040_041_071	PCB040 & 041 & 071	pg/g	11100	J	23
LWG0106R002SDS015C10	PCB040_041_071	PCB040 & 041 & 071	pg/g	253	J	23
LWG0106R002SDS015C20	PCB040_041_071	PCB040 & 041 & 071	pg/g	170	J	23
LWG0106R002SDS015C31	PCB040_041_071	PCB040 & 041 & 071	pg/g	158	J	23
LWG0106R004SDS015C00	PCB040_041_071	PCB040 & 041 & 071	pg/g	284	J	23
LWG0107R006SDS015C00	PCB040_041_071	PCB040 & 041 & 071	pg/g	14300	J	23
LWG0108R003SDS015C00	PCB040_041_071	PCB040 & 041 & 071	pg/g	242	J	23
LWG0109R002SDS015C00	PCB040_041_071	PCB040 & 041 & 071	pg/g	1120	J	23
LWG0102R001SDS015C00	PCB044_047_065	PCB044 & 047 & 065	pg/g	34800	J	23
LWG0103R003SDS015C10	PCB044_047_065	PCB044 & 047 & 065	pg/g	101	J	23
LWG0103R004SDS015C11	PCB044_047_065	PCB044 & 047 & 065	pg/g	30800	J	23
LWG0103R005SDS015C00	PCB044_047_065	PCB044 & 047 & 065	pg/g	45900	J	23
LWG0106R002SDS015C10	PCB044_047_065	PCB044 & 047 & 065	pg/g	2320	J	23
LWG0106R002SDS015C20	PCB044_047_065	PCB044 & 047 & 065	pg/g	1470	J	23
LWG0106R002SDS015C31	PCB044_047_065	PCB044 & 047 & 065	pg/g	1350	J	23
LWG0106R002SDS015C32	PCB044_047_065	PCB044 & 047 & 065	pg/g	1450	J	23
LWG0106R004SDS015C00	PCB044_047_065	PCB044 & 047 & 065	pg/g	910	J	23
LWG0107R006SDS015C00	PCB044_047_065	PCB044 & 047 & 065	pg/g	25900	J	23
LWG0108R003SDS015C00	PCB044_047_065	PCB044 & 047 & 065	pg/g	928	J	23
LWG0109R002SDS015C00	PCB044_047_065	PCB044 & 047 & 065	pg/g	3110	J	23
LWG0102R001SDS015C00	PCB045_051	PCB045 & 051	pg/g	5440	J	23
LWG0103R003SDS015C10	PCB045_051	PCB045 & 051	pg/g	18.1	J	23
LWG0103R004SDS015C11	PCB045_051	PCB045 & 051	pg/g	7970	J	23
LWG0103R005SDS015C00	PCB045_051	PCB045 & 051	pg/g	3010	J	23
LWG0106R002SDS015C10	PCB045_051	PCB045 & 051	pg/g	913	J	23
LWG0106R002SDS015C20	PCB045_051	PCB045 & 051	pg/g	478	J	23
LWG0106R002SDS015C31	PCB045_051	PCB045 & 051	pg/g	491	J	23
LWG0106R004SDS015C00	PCB045_051	PCB045 & 051	pg/g	75	J	23
LWG0107R006SDS015C00	PCB045_051	PCB045 & 051	pg/g	4380	J	23
LWG0108R003SDS015C00	PCB045_051	PCB045 & 051	pg/g	84.6	J	23
LWG0109R002SDS015C00	PCB045_051	PCB045 & 051	pg/g	880	J	23
LWG0102R001SDS015C00	PCB049_069	PCB049 & 069	pg/g	20300	J	23
LWG0103R003SDS015C10	PCB049_069	PCB049 & 069	pg/g	62.1	J	23

Table E-18. Qualified Data for PCB Congeners in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0103R004SDS015C11	PCB049_069	PCB049 & 069	pg/g	19000	J	23
LWG0103R005SDS015C00	PCB049_069	PCB049 & 069	pg/g	28700	J	23
LWG0106R002SDS015C10	PCB049_069	PCB049 & 069	pg/g	669	J	23
LWG0106R002SDS015C20	PCB049_069	PCB049 & 069	pg/g	423	J	23
LWG0106R002SDS015C31	PCB049_069	PCB049 & 069	pg/g	411	J	23
LWG0106R004SDS015C00	PCB049_069	PCB049 & 069	pg/g	529	J	23
LWG0107R006SDS015C00	PCB049_069	PCB049 & 069	pg/g	15000	J	23
LWG0108R003SDS015C00	PCB049_069	PCB049 & 069	pg/g	710	J	23
LWG0109R002SDS015C00	PCB049_069	PCB049 & 069	pg/g	1820	J	23
LWG0102R001SDS015C00	PCB050_053	PCB050 & 053	pg/g	4820	J	23
LWG0103R003SDS015C10	PCB050_053	PCB050 & 053	pg/g	16.6	J	23
LWG0103R004SDS015C11	PCB050_053	PCB050 & 053	pg/g	5430	J	23
LWG0103R005SDS015C00	PCB050_053	PCB050 & 053	pg/g	4520	J	23
LWG0106R002SDS015C10	PCB050_053	PCB050 & 053	pg/g	583	J	23
LWG0106R002SDS015C20	PCB050_053	PCB050 & 053	pg/g	305	J	23
LWG0106R002SDS015C31	PCB050_053	PCB050 & 053	pg/g	334	J	23
LWG0106R004SDS015C00	PCB050_053	PCB050 & 053	pg/g	81.7	J	23
LWG0107R006SDS015C00	PCB050_053	PCB050 & 053	pg/g	3310	J	23
LWG0108R003SDS015C00	PCB050_053	PCB050 & 053	pg/g	108	J	23
LWG0109R002SDS015C00	PCB050_053	PCB050 & 053	pg/g	727	J	23
LWG0102R001SDS015C00	PCB059_062_075	PCB059 & 062 & 075	pg/g	2670	J	23
LWG0103R003SDS015C10	PCB059_062_075	PCB059 & 062 & 075	pg/g	9.04	J	23
LWG0103R004SDS015C11	PCB059_062_075	PCB059 & 062 & 075	pg/g	3260	J	23
LWG0103R005SDS015C00	PCB059_062_075	PCB059 & 062 & 075	pg/g	1560	J	23
LWG0106R002SDS015C10	PCB059_062_075	PCB059 & 062 & 075	pg/g	115	J	23
LWG0106R002SDS015C20	PCB059_062_075	PCB059 & 062 & 075	pg/g	71.2	J	23
LWG0106R002SDS015C31	PCB059_062_075	PCB059 & 062 & 075	pg/g	70.3	J	23
LWG0106R004SDS015C00	PCB059_062_075	PCB059 & 062 & 075	pg/g	44.7	J	23
LWG0107R006SDS015C00	PCB059_062_075	PCB059 & 062 & 075	pg/g	1970	J	23
LWG0108R003SDS015C00	PCB059_062_075	PCB059 & 062 & 075	pg/g	46	J	23
LWG0109R002SDS015C00	PCB059_062_075	PCB059 & 062 & 075	pg/g	173	J	23
LWG0102R001SDS015C00	PCB061_070_074_	PCB061 & 070 & 074 & 076	pg/g	55500	J	23
LWG0103R003SDS015C10	PCB061_070_074_	PCB061 & 070 & 074 & 076	pg/g	165	J	23
LWG0103R004SDS015C11	PCB061_070_074_	PCB061 & 070 & 074 & 076	pg/g	28300	J	23
LWG0103R005SDS015C00	PCB061_070_074_	PCB061 & 070 & 074 & 076	pg/g	76900	J	23
LWG0106R002SDS015C10	PCB061_070_074_	PCB061 & 070 & 074 & 076	pg/g	377	J	23
LWG0106R002SDS015C20	PCB061_070_074_	PCB061 & 070 & 074 & 076	pg/g	288	J	23
LWG0106R002SDS015C31	PCB061_070_074_	PCB061 & 070 & 074 & 076	pg/g	319	J	23
LWG0106R004SDS015C00	PCB061_070_074_	PCB061 & 070 & 074 & 076	pg/g	2200	J	23
LWG0107R006SDS015C00	PCB061_070_074_	PCB061 & 070 & 074 & 076	pg/g	36300	J	23
LWG0108R003SDS015C00	PCB061_070_074_	PCB061 & 070 & 074 & 076	pg/g	1970	J	23
LWG0109R002SDS015C00	PCB061_070_074_	PCB061 & 070 & 074 & 076	pg/g	2980	J	23
LWG0102R001SDS015C00	PCB083_099	PCB083 & 099	pg/g	14100	J	23
LWG0103R003SDS015C10	PCB083_099	PCB083 & 099	pg/g	164	J	23
LWG0103R004SDS015C11	PCB083_099	PCB083 & 099	pg/g	7510	J	23
LWG0103R005SDS015C00	PCB083_099	PCB083 & 099	pg/g	130000	J	23
LWG0106R002SDS015C10	PCB083_099	PCB083 & 099	pg/g	923	J	23
LWG0106R002SDS015C20	PCB083_099	PCB083 & 099	pg/g	1040	J	23
LWG0106R002SDS015C31	PCB083_099	PCB083 & 099	pg/g	559	J	23

Table E-18. Qualified Data for PCB Congeners in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0106R004SDS015C00	PCB083_099	PCB083 & 099	pg/g	1270	J	23
LWG0107R006SDS015C00	PCB083_099	PCB083 & 099	pg/g	13700	J	23
LWG0108R003SDS015C00	PCB083_099	PCB083 & 099	pg/g	3010	J	23
LWG0109R002SDS015C00	PCB083_099	PCB083 & 099	pg/g	2550	J	23
LWG0102R001SDS015C00	PCB085_116_117	PCB085 & 116 & 117	pg/g	6170	J	23
LWG0103R003SDS015C10	PCB085_116_117	PCB085 & 116 & 117	pg/g	48.6	J	23
LWG0103R004SDS015C11	PCB085_116_117	PCB085 & 116 & 117	pg/g	2690	J	23
LWG0103R005SDS015C00	PCB085_116_117	PCB085 & 116 & 117	pg/g	29200	J	23
LWG0106R002SDS015C10	PCB085_116_117	PCB085 & 116 & 117	pg/g	128	J	23
LWG0106R002SDS015C20	PCB085_116_117	PCB085 & 116 & 117	pg/g	135	J	23
LWG0106R002SDS015C31	PCB085_116_117	PCB085 & 116 & 117	pg/g	86.5	J	23
LWG0106R004SDS015C00	PCB085_116_117	PCB085 & 116 & 117	pg/g	379	J	23
LWG0107R006SDS015C00	PCB085_116_117	PCB085 & 116 & 117	pg/g	5470	J	23
LWG0108R003SDS015C00	PCB085_116_117	PCB085 & 116 & 117	pg/g	605	J	23
LWG0109R002SDS015C00	PCB085_116_117	PCB085 & 116 & 117	pg/g	615	J	23
LWG0102R001SDS015C00	PCB086_087_097_	119 & 125	pg/g	17300	J	23
LWG0103R003SDS015C10	PCB086_087_097_	119 & 125	pg/g	196	J	23
LWG0103R004SDS015C11	PCB086_087_097_	119 & 125	pg/g	10000	J	23
LWG0103R005SDS015C00	PCB086_087_097_	119 & 125	pg/g	159000	J	23
LWG0106R002SDS015C10	PCB086_087_097_	119 & 125	pg/g	565	J	23
LWG0106R002SDS015C20	PCB086_087_097_	119 & 125	pg/g	288	J	23
LWG0106R002SDS015C31	PCB086_087_097_	119 & 125	pg/g	365	J	23
LWG0106R004SDS015C00	PCB086_087_097_	119 & 125	pg/g	1900	J	23
LWG0107R006SDS015C00	PCB086_087_097_	119 & 125	pg/g	15100	J	23
LWG0108R003SDS015C00	PCB086_087_097_	119 & 125	pg/g	3010	J	23
LWG0109R002SDS015C00	PCB086_087_097_	119 & 125	pg/g	2720	J	23
LWG0102R001SDS015C00	PCB088_091	PCB088 & 091	pg/g	4350	J	23
LWG0103R003SDS015C10	PCB088_091	PCB088 & 091	pg/g	49	J	23
LWG0103R004SDS015C11	PCB088_091	PCB088 & 091	pg/g	2570	J	23
LWG0103R005SDS015C00	PCB088_091	PCB088 & 091	pg/g	32100	J	23
LWG0106R002SDS015C10	PCB088_091	PCB088 & 091	pg/g	284	J	23
LWG0106R002SDS015C20	PCB088_091	PCB088 & 091	pg/g	274	J	23
LWG0106R002SDS015C31	PCB088_091	PCB088 & 091	pg/g	174	J	23
LWG0106R004SDS015C00	PCB088_091	PCB088 & 091	pg/g	301	J	23
LWG0107R006SDS015C00	PCB088_091	PCB088 & 091	pg/g	3680	J	23
LWG0108R003SDS015C00	PCB088_091	PCB088 & 091	pg/g	584	J	23
LWG0109R002SDS015C00	PCB088_091	PCB088 & 091	pg/g	925	J	23
LWG0102R001SDS015C00	PCB090_101_113	PCB090 & 101 & 113	pg/g	17800	J	23
LWG0103R003SDS015C10	PCB090_101_113	PCB090 & 101 & 113	pg/g	346	J	23
LWG0103R004SDS015C11	PCB090_101_113	PCB090 & 101 & 113	pg/g	13200	J	23
LWG0103R005SDS015C00	PCB090_101_113	PCB090 & 101 & 113	pg/g	258000	J	23
LWG0106R002SDS015C10	PCB090_101_113	PCB090 & 101 & 113	pg/g	1410	J	23
LWG0106R002SDS015C20	PCB090_101_113	PCB090 & 101 & 113	pg/g	1570	J	23
LWG0106R002SDS015C31	PCB090_101_113	PCB090 & 101 & 113	pg/g	924	J	23
LWG0106R002SDS015C32	PCB090 101 113	PCB090 & 101 & 113	pg/g	1310	J	23
LWG0106R004SDS015C00	PCB090_101_113	PCB090 & 101 & 113	pg/g	3070	J	23
LWG0107R006SDS015C00	PCB090_101_113	PCB090 & 101 & 113	pg/g	15800	J	23
LWG0108R003SDS015C00	PCB090_101_113	PCB090 & 101 & 113	pg/g	5540	J	23
LWG0109R002SDS015C00	PCB090_101_113	PCB090 & 101 & 113	pg/g	5840	J	23

Table E-18. Qualified Data for PCB Congeners in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0102R001SDS015C00	PCB093_095_098_	102	pg/g	16600	J	23
LWG0103R003SDS015C10	PCB093_095_098_	102	pg/g	327	J	23
LWG0103R004SDS015C11	PCB093_095_098_	102	pg/g	13600	J	23
LWG0103R005SDS015C00	PCB093_095_098_	102	pg/g	235000	J	23
LWG0106R002SDS015C10	PCB093_095_098_	102	pg/g	1760	J	23
LWG0106R002SDS015C20	PCB093_095_098_	102	pg/g	357	J	23
LWG0106R002SDS015C31	PCB093_095_098_	102	pg/g	1010	J	23
LWG0106R002SDS015C32	PCB093_095_098_	102	pg/g	1430	J	23
LWG0106R004SDS015C00	PCB093_095_098_	102	pg/g	2210	J	23
LWG0107R006SDS015C00	PCB093_095_098_	102	pg/g	13300	J	23
LWG0108R003SDS015C00	PCB093_095_098_	102	pg/g	3770	J	23
LWG0109R002SDS015C00	PCB093_095_098_	102	pg/g	5000	J	23
LWG0102R001SDS015C00	PCB107_124	PCB107 & 124	pg/g	910	J	23
LWG0103R003SDS015C10	PCB107_124	PCB107 & 124	pg/g	10.4	J	23
LWG0103R004SDS015C11	PCB107_124	PCB107 & 124	pg/g	503	J	23
LWG0103R005SDS015C00	PCB107_124	PCB107 & 124	pg/g	7110	J	23
LWG0106R002SDS015C10	PCB107_124	PCB107 & 124	pg/g	22	J	23
LWG0106R002SDS015C20	PCB107_124	PCB107 & 124	pg/g	24	J	23
LWG0106R002SDS015C31	PCB107_124	PCB107 & 124	pg/g	18.9	J	23
LWG0106R004SDS015C00	PCB107_124	PCB107 & 124	pg/g	109	J	23
LWG0108R003SDS015C00	PCB107_124	PCB107 & 124	pg/g	158	J	23
LWG0109R002SDS015C00	PCB107_124	PCB107 & 124	pg/g	153	J	23
LWG0102R001SDS015C00	PCB110_115	PCB110 & 115	pg/g	24800	J	23
LWG0103R003SDS015C10	PCB110_115	PCB110 & 115	pg/g	437	J	23
LWG0103R004SDS015C11	PCB110_115	PCB110 & 115	pg/g	15900	J	23
LWG0103R005SDS015C00	PCB110_115	PCB110 & 115	pg/g	302000	J	23
LWG0106R002SDS015C10	PCB110_115	PCB110 & 115	pg/g	943	J	23
LWG0106R002SDS015C20	PCB110_115	PCB110 & 115	pg/g	962	J	23
LWG0106R002SDS015C31	PCB110_115	PCB110 & 115	pg/g	645	J	23
LWG0106R004SDS015C00	PCB110_115	PCB110 & 115	pg/g	3170	J	23
LWG0107R006SDS015C00	PCB110_115	PCB110 & 115	pg/g	18700	J	23
LWG0108R003SDS015C00	PCB110_115	PCB110 & 115	pg/g	5550	J	23
LWG0109R002SDS015C00	PCB110_115	PCB110 & 115	pg/g	5150	J	23
LWG0102R001SDS015C00	PCB128_166	PCB128 & 166	pg/g	2080	J	23
LWG0103R003SDS015C10	PCB128_166	PCB128 & 166	pg/g	91.6	J	23
LWG0103R004SDS015C11	PCB128_166	PCB128 & 166	pg/g	2510	J	23
LWG0103R005SDS015C00	PCB128_166	PCB128 & 166	pg/g	42000	J	23
LWG0106R002SDS015C10	PCB128_166	PCB128 & 166	pg/g	237	J	23
LWG0106R002SDS015C20	PCB128_166	PCB128 & 166	pg/g	408	J	23
LWG0106R002SDS015C31	PCB128_166	PCB128 & 166	pg/g	213	J	23
LWG0106R004SDS015C00	PCB128_166	PCB128 & 166	pg/g	476	J	23
LWG0107R006SDS015C00	PCB128_166	PCB128 & 166	pg/g	2590	J	23
LWG0108R003SDS015C00	PCB128_166	PCB128 & 166	pg/g	1020	J	23
LWG0109R002SDS015C00	PCB128_166	PCB128 & 166	pg/g	1190	J	23
LWG0102R001SDS015C00	PCB129_138_160_	PCB129 & 138 & 160 & 163	pg/g	12100	J	23
LWG0103R003SDS015C10	PCB129_138_160_	PCB129 & 138 & 160 & 163	pg/g	700	J	23
LWG0103R004SDS015C11	PCB129_138_160_	PCB129 & 138 & 160 & 163	pg/g	15900	J	23
LWG0103R005SDS015C00	PCB129_138_160_	PCB129 & 138 & 160 & 163	pg/g	342000	J	23
LWG0106R002SDS015C10	PCB129_138_160_	PCB129 & 138 & 160 & 163	pg/g	2930	J	23

Table E-18. Qualified Data for PCB Congeners in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0106R002SDS015C20	PCB129_138_160_	PCB129 & 138 & 160 & 163	pg/g	6540	J	23
LWG0106R002SDS015C31	PCB129_138_160_	PCB129 & 138 & 160 & 163	pg/g	2900	J	23
LWG0106R002SDS015C32	PCB129_138_160_	PCB129 & 138 & 160 & 163	pg/g	3390	J	23
LWG0106R004SDS015C00	PCB129_138_160_	PCB129 & 138 & 160 & 163	pg/g	3320	J	23
LWG0107R006SDS015C00	PCB129_138_160_	PCB129 & 138 & 160 & 163	pg/g	8940	J	23
LWG0108R003SDS015C00	PCB129_138_160_	PCB129 & 138 & 160 & 163	pg/g	7910	J	23
LWG0109R002SDS015C00	PCB129_138_160_	PCB129 & 138 & 160 & 163	pg/g	13000	J	23
LWG0102R001SDS015C00	PCB134_143	PCB134 & 143	pg/g	760	J	23
LWG0103R003SDS015C10	PCB134_143	PCB134 & 143	pg/g	36.5	J	23
LWG0103R004SDS015C11	PCB134_143	PCB134 & 143	pg/g	858	J	23
LWG0103R005SDS015C00	PCB134_143	PCB134 & 143	pg/g	13800	J	23
LWG0106R002SDS015C10	PCB134_143	PCB134 & 143	pg/g	167	J	23
LWG0106R002SDS015C20	PCB134_143	PCB134 & 143	pg/g	270	J	23
LWG0106R002SDS015C31	PCB134_143	PCB134 & 143	pg/g	119	J	23
LWG0106R004SDS015C00	PCB134_143	PCB134 & 143	pg/g	185	J	23
LWG0108R003SDS015C00	PCB134_143	PCB134 & 143	pg/g	392	J	23
LWG0109R002SDS015C00	PCB134_143	PCB134 & 143	pg/g	547	J	23
LWG0102R001SDS015C00	PCB135_151_154	PCB135 & 151 & 154	pg/g	3300	J	23
LWG0103R003SDS015C10	PCB135_151_154	PCB135 & 151 & 154	pg/g	316	J	23
LWG0103R004SDS015C11	PCB135_151_154	PCB135 & 151 & 154	pg/g	4650	J	23
LWG0103R005SDS015C00	PCB135_151_154	PCB135 & 151 & 154	pg/g	60100	J	23
LWG0106R002SDS015C10	PCB135_151_154	PCB135 & 151 & 154	pg/g	1520	J	23
LWG0106R002SDS015C31	PCB135_151_154	PCB135 & 151 & 154	pg/g	1080	J	23
LWG0106R004SDS015C00	PCB135_151_154	PCB135 & 151 & 154	pg/g	867	J	23
LWG0107R006SDS015C00	PCB135_151_154	PCB135 & 151 & 154	pg/g	2660	J	23
LWG0108R003SDS015C00	PCB135_151_154	PCB135 & 151 & 154	pg/g	2320	J	23
LWG0109R002SDS015C00	PCB135_151_154	PCB135 & 151 & 154	pg/g	6050	J	23
LWG0103R003SDS015C10	PCB139_140	PCB139 & 140	pg/g	9.78	J	23
LWG0103R004SDS015C11	PCB139_140	PCB139 & 140	pg/g	252	J	23
LWG0103R005SDS015C00	PCB139_140	PCB139 & 140	pg/g	5040	J	23
LWG0106R002SDS015C10	PCB139_140	PCB139 & 140	pg/g	36.6	J	23
LWG0106R002SDS015C20	PCB139_140	PCB139 & 140	pg/g	60.5	J	23
LWG0106R002SDS015C31	PCB139_140	PCB139 & 140	pg/g	25.7	J	23
LWG0106R004SDS015C00	PCB139_140	PCB139 & 140	pg/g	57.3	J	23
LWG0107R006SDS015C00	PCB139_140	PCB139 & 140	pg/g	923	J	23
LWG0108R003SDS015C00	PCB139_140	PCB139 & 140	pg/g	146	J	23
LWG0109R002SDS015C00	PCB139_140	PCB139 & 140	pg/g	160	J	23
LWG0102R001SDS015C00	PCB147_149	PCB147 & 149	pg/g	7290	J	23
LWG0103R003SDS015C10	PCB147_149	PCB147 & 149	pg/g	653	J	23
LWG0103R004SDS015C11	PCB147_149	PCB147 & 149	pg/g	12000	J	23
LWG0103R005SDS015C00	PCB147_149	PCB147 & 149	pg/g	212000	J	23
LWG0106R002SDS015C10	PCB147_149	PCB147 & 149	pg/g	2940	J	23
LWG0106R002SDS015C20	PCB147_149	PCB147 & 149	pg/g	5550	J	23
LWG0106R002SDS015C31	PCB147_149	PCB147 & 149	pg/g	2250	J	23
LWG0106R004SDS015C00	PCB147_149	PCB147 & 149	pg/g	2280	J	23
LWG0107R006SDS015C00	PCB147_149	PCB147 & 149	pg/g	7000	J	23
LWG0108R003SDS015C00	PCB147_149	PCB147 & 149	pg/g	5290	J	23
LWG0109R002SDS015C00	PCB147_149	PCB147 & 149	pg/g	12700	J	23
LWG0102R001SDS015C00	PCB153_168	PCB153 & 168	pg/g	7890	J	23

Table E-18. Qualified Data for PCB Congeners in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0103R003SDS015C10	PCB153_168	PCB153 & 168	pg/g	637	J	23
LWG0103R004SDS015C11	PCB153_168	PCB153 & 168	pg/g	10600	J	23
LWG0103R005SDS015C00	PCB153_168	PCB153 & 168	pg/g	208000	J	23
LWG0106R002SDS015C10	PCB153_168	PCB153 & 168	pg/g	3370	J	23
LWG0106R002SDS015C20	PCB153_168	PCB153 & 168	pg/g	7940	J	23
LWG0106R002SDS015C31	PCB153_168	PCB153 & 168	pg/g	3350	J	23
LWG0106R002SDS015C32	PCB153_168	PCB153 & 168	pg/g	3850	J	23
LWG0106R004SDS015C00	PCB153_168	PCB153 & 168	pg/g	2510	J	23
LWG0108R003SDS015C00	PCB153_168	PCB153 & 168	pg/g	6880	J	23
LWG0109R002SDS015C00	PCB153_168	PCB153 & 168	pg/g	14600	J	23
LWG0103R003SDS015C10	PCB171_173	PCB171 & 173	pg/g	82.3	J	23
LWG0103R004SDS015C11	PCB171_173	PCB171 & 173	pg/g	1340	J	23
LWG0103R005SDS015C00	PCB171_173	PCB171 & 173	pg/g	9230	J	23
LWG0106R002SDS015C10	PCB171_173	PCB171 & 173	pg/g	433	J	23
LWG0106R002SDS015C20	PCB171_173	PCB171 & 173	pg/g	1130	J	23
LWG0106R002SDS015C31	PCB171_173	PCB171 & 173	pg/g	552	J	23
LWG0106R004SDS015C00	PCB171_173	PCB171 & 173	pg/g	175	J	23
LWG0107R006SDS015C00	PCB171_173	PCB171 & 173	pg/g	1990	J	23
LWG0108R003SDS015C00	PCB171_173	PCB171 & 173	pg/g	674	J	23
LWG0109R002SDS015C00	PCB171_173	PCB171 & 173	pg/g	1650	J	23
LWG0102R001SDS015C00	PCB180_193	PCB180 & 193	pg/g	3980	J	23
LWG0103R003SDS015C10	PCB180_193	PCB180 & 193	pg/g	552	J	23
LWG0103R004SDS015C11	PCB180_193	PCB180 & 193	pg/g	8080	J	23
LWG0103R005SDS015C00	PCB180_193	PCB180 & 193	pg/g	50300	J	23
LWG0106R002SDS015C10	PCB180_193	PCB180 & 193	pg/g	3680	J	23
LWG0106R002SDS015C20	PCB180_193	PCB180 & 193	pg/g	8680	J	23
LWG0106R002SDS015C31	PCB180_193	PCB180 & 193	pg/g	5050	J	23
LWG0106R002SDS015C32	PCB180_193	PCB180 & 193	pg/g	4480	J	23
LWG0106R004SDS015C00	PCB180_193	PCB180 & 193	pg/g	1190	J	23
LWG0107R006SDS015C00	PCB180_193	PCB180 & 193	pg/g	5490	J	23
LWG0108R003SDS015C00	PCB180_193	PCB180 & 193	pg/g	3750	J	23
LWG0109R002SDS015C00	PCB180_193	PCB180 & 193	pg/g	13700	J	23
LWG0103R003SDS015C10	PCB183_185	PCB183 & 185	pg/g	189	J	23
LWG0103R004SDS015C11	PCB183_185	PCB183 & 185	pg/g	3070	J	23
LWG0103R005SDS015C00	PCB183_185	PCB183 & 185	pg/g	16200	J	23
LWG0106R002SDS015C10	PCB183_185	PCB183 & 185	pg/g	1120	J	23
LWG0106R002SDS015C20	PCB183_185	PCB183 & 185	pg/g	2870	J	23
LWG0106R002SDS015C31	PCB183_185	PCB183 & 185	pg/g	1330	J	23
LWG0106R004SDS015C00	PCB183_185	PCB183 & 185	pg/g	369	J	23
LWG0107R006SDS015C00	PCB183_185	PCB183 & 185	pg/g	4140	J	23
LWG0108R003SDS015C00	PCB183_185	PCB183 & 185	pg/g	1260	J	23
LWG0109R002SDS015C00	PCB183_185	PCB183 & 185	pg/g	4400	J	23
LWG0102R001SDS015C00	PCB197_200	PCB197 & 200	pg/g	173	J	23
LWG0103R003SDS015C10	PCB197_200	PCB197 & 200	pg/g	27	J	23
LWG0103R004SDS015C11	PCB197_200	PCB197 & 200	pg/g	417	J	23
LWG0103R005SDS015C00	PCB197_200	PCB197 & 200	pg/g	1100	J	23
LWG0106R002SDS015C10	PCB197_200	PCB197 & 200	pg/g	219	J	23
LWG0106R002SDS015C20	PCB197_200	PCB197 & 200	pg/g	300	J	23
LWG0106R002SDS015C31	PCB197_200	PCB197 & 200	pg/g	193	J	23

Table E-18. Qualified Data for PCB Congeners in Sediment Samples

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0106R002SDS015C32	PCB197_200	PCB197 & 200	pg/g	166	J	23
LWG0106R004SDS015C00	PCB197_200	PCB197 & 200	pg/g	39.1	J	23
LWG0107R006SDS015C00	PCB197_200	PCB197 & 200	pg/g	2430	J	23
LWG0108R003SDS015C00	PCB197_200	PCB197 & 200	pg/g	133	J	23
LWG0109R002SDS015C00	PCB197_200	PCB197 & 200	pg/g	547	J	23
LWG0102R001SDS015C00	PCB198_199	PCB198 & 199	pg/g	1050	J	23
LWG0103R003SDS015C10	PCB198_199	PCB198 & 199	pg/g	134	J	23
LWG0103R004SDS015C11	PCB198_199	PCB198 & 199	pg/g	3020	J	23
LWG0103R005SDS015C00	PCB198_199	PCB198 & 199	pg/g	7190	J	23
LWG0106R002SDS015C10	PCB198_199	PCB198 & 199	pg/g	1320	J	23
LWG0106R002SDS015C20	PCB198_199	PCB198 & 199	pg/g	2120	J	23
LWG0106R002SDS015C31	PCB198_199	PCB198 & 199	pg/g	1130	J	23
LWG0106R004SDS015C00	PCB198_199	PCB198 & 199	pg/g	207	J	23
LWG0107R006SDS015C00	PCB198_199	PCB198 & 199	pg/g	3390	J	23
LWG0108R003SDS015C00	PCB198_199	PCB198 & 199	pg/g	678	J	23
LWG0109R002SDS015C00	PCB198_199	PCB198 & 199	pg/g	3330	J	23

Notes:

[a] Rejected data are not included in this summary.

[b] Qualifiers and data qualifier reason codes are defined in Table X-1.

Table E-19. Qualified Data for Dioxins and Furans in Sediment Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0102R001SDS015C00	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	20.9	NJ	23
LWG0103R003SDS015C10	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	11.6	NJ	23
LWG0103R004SDS015C11	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	32.8	NJ	23
LWG0103R005SDS015C00	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	122	NJ	23
LWG0106R002SDS015C10	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	87.7	NJ	23
LWG0106R002SDS015C20	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	209	NJ	23
LWG0106R002SDS015C31	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	69.4	NJ	23
LWG0106R002SDS015C32	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	65.4	NJ	23
LWG0106R004SDS015C00	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	9.78	NJ	23
LWG0108R003SDS015C00	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	14.8	NJ	23
LWG0109R002SDS015C00	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	pg/g	66.7	NJ	23
LWG0102R001SDS015C00	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	137	NJ	23
LWG0103R003SDS015C10	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	60.7	NJ	23
LWG0103R004SDS015C11	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	145	NJ	23
LWG0103R005SDS015C00	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	446	NJ	23
LWG0106R002SDS015C10	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	333	NJ	23
LWG0106R002SDS015C20	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	545	NJ	23
LWG0106R002SDS015C31	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	262	NJ	23
LWG0106R002SDS015C32	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	386	NJ	23
LWG0106R004SDS015C00	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	51	NJ	23
LWG0108R003SDS015C00	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	53	NJ	23
LWG0109R002SDS015C00	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	pg/g	510	NJ	23
LWG0102R001SDS015C00	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	1.53	NJ	23
LWG0103R003SDS015C10	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	0.724	NJ	23, L
LWG0103R004SDS015C11	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	2.7	NJ	23
LWG0103R005SDS015C00	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	6.35	NJ	23
LWG0106R002SDS015C10	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	14.5	NJ	23
LWG0106R002SDS015C20	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	34.5	NJ	23
LWG0106R002SDS015C31	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	12	NJ	23
LWG0106R002SDS015C32	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	13.1	NJ	23
LWG0106R004SDS015C00	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	2.15	NJ	23
LWG0108R003SDS015C00	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	1.16	NJ	23
LWG0109R002SDS015C00	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	pg/g	5.1	NJ	23
LWG0102R001SDS015C00	70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran	pg/g	3.5	NJ	23
LWG0103R003SDS015C10	70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran	pg/g	0.902	NJ	23, L
LWG0103R004SDS015C11	70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran	pg/g	3.15	NJ	23
LWG0103R005SDS015C00	70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran	pg/g	12.6	NJ	23
LWG0106R002SDS015C10	70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran	pg/g	40.7	NJ	23
LWG0106R002SDS015C20	70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran	pg/g	239	NJ	23
LWG0106R002SDS015C31	70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran	pg/g	36.2	NJ	23
LWG0106R002SDS015C32	70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran	pg/g	36.7	NJ	23
LWG0106R004SDS015C00	70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran	pg/g	9.57	NJ	23
LWG0108R003SDS015C00	70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran	pg/g	1.27	NJ	23

Table E-19. Qualified Data for Dioxins and Furans in Sediment Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0109R002SDS015C00	70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran	pg/g	5.36	NJ	23
LWG0102R001SDS015C00	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	1.11	NJ	23
LWG0103R003SDS015C10	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	0.539	NJ	23, L
LWG0103R004SDS015C11	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	0.811	NJ	23
LWG0103R005SDS015C00	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	3.98	NJ	23
LWG0106R002SDS015C10	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	6.45	NJ	23
LWG0106R002SDS015C20	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	6.93	NJ	23
LWG0106R002SDS015C31	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	4.97	NJ	23
LWG0106R002SDS015C32	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	6.75	NJ	23
LWG0106R004SDS015C00	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	0.449	NJ	23, L
LWG0108R003SDS015C00	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	0.434	NJ	23, L
LWG0109R002SDS015C00	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	pg/g	5.72	NJ	23
LWG0102R001SDS015C00	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	pg/g	1.45	NJ	23
LWG0103R003SDS015C10	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	pg/g	0.451	NJ	23, L
LWG0103R004SDS015C11	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	pg/g	1.26	NJ	23
LWG0103R005SDS015C00	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	pg/g	6.1	NJ	23
LWG0106R002SDS015C10	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	pg/g	57.3	NJ	23
LWG0106R002SDS015C20	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	pg/g	77	NJ	23
LWG0106R002SDS015C31	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	pg/g	30.6	NJ	23
LWG0106R002SDS015C32	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	pg/g	23.6	NJ	23
LWG0106R004SDS015C00	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	pg/g	2.63	NJ	23
LWG0108R003SDS015C00	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	pg/g	0.87	NJ	23, L
LWG0109R002SDS015C00	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	pg/g	3.31	NJ	23
LWG0102R001SDS015C00	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/g	5.37	NJ	23
LWG0103R003SDS015C10	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/g	2.31	NJ	23
LWG0103R004SDS015C11	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/g	5.97	NJ	23
LWG0103R005SDS015C00	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/g	18.2	NJ	23
LWG0106R002SDS015C10	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/g	40.9	NJ	23
LWG0106R002SDS015C20	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/g	42.9	NJ	23
LWG0106R002SDS015C31	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/g	28.9	NJ	23
LWG0106R002SDS015C32	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/g	35	NJ	23
LWG0106R004SDS015C00	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/g	1.8	NJ	23
LWG0108R003SDS015C00	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/g	2.31	NJ	23
LWG0109R002SDS015C00	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	pg/g	23.3	NJ	23
LWG0102R001SDS015C00	72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran	pg/g	0.101	NJ	23, L
LWG0103R005SDS015C00	72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran	pg/g	0.335	NJ	23, L
LWG0106R002SDS015C10	72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran	pg/g	1.27	NJ	23, L
LWG0106R002SDS015C20	72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran	pg/g	4.3	NJ	23
LWG0106R002SDS015C31	72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran	pg/g	0.756	NJ	23, L
LWG0106R002SDS015C32	72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran	pg/g	1.04	NJ	23, L
LWG0106R004SDS015C00	72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran	pg/g	0.178	NJ	23, L
LWG0109R002SDS015C00	72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran	pg/g	0.183	NJ	23, L
LWG0102R001SDS015C00	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g	3.24	NJ	23

Table E-19. Qualified Data for Dioxins and Furans in Sediment Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0103R003SDS015C10	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g	1.55	NJ	23
LWG0103R004SDS015C11	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g	2.53	NJ	23
LWG0103R005SDS015C00	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g	10.5	NJ	23
LWG0106R002SDS015C10	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g	21.8	NJ	23
LWG0106R002SDS015C20	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g	21.1	NJ	23
LWG0106R002SDS015C31	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g	15.7	NJ	23
LWG0106R002SDS015C32	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g	19.8	NJ	23
LWG0106R004SDS015C00	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g	1.34	NJ	23
LWG0108R003SDS015C00	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g	1.36	NJ	23
LWG0109R002SDS015C00	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	pg/g	13.6	NJ	23
LWG0102R001SDS015C00	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	pg/g	1.23	NJ	23
LWG0103R003SDS015C10	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	pg/g	0.252	NJ	23, L
LWG0103R004SDS015C11	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	pg/g	0.644	NJ	23, L
LWG0103R005SDS015C00	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	pg/g	3.66	NJ	23
LWG0106R002SDS015C10	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	pg/g	5.74	NJ	23
LWG0106R002SDS015C20	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	pg/g	145	NJ	23
LWG0106R002SDS015C31	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	pg/g	4.66	NJ	23
LWG0106R002SDS015C32	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	pg/g	4.26	NJ	23
LWG0106R004SDS015C00	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	pg/g	4.87	NJ	23
LWG0108R003SDS015C00	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	pg/g	0.252	NJ	23, L
LWG0109R002SDS015C00	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	pg/g	1.17	NJ	23
LWG0102R001SDS015C00	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	0.629	NJ	23, L
LWG0103R003SDS015C10	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	0.334	NJ	23, L
LWG0103R004SDS015C11	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	0.502	NJ	23, L
LWG0103R005SDS015C00	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	2.98	NJ	23
LWG0106R002SDS015C10	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	12.2	NJ	23
LWG0106R002SDS015C20	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	11.1	NJ	23
LWG0106R002SDS015C31	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	7.82	NJ	23
LWG0106R002SDS015C32	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	9.74	NJ	23
LWG0106R004SDS015C00	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	0.336	NJ	23, L
LWG0108R003SDS015C00	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	0.322	NJ	23, L
LWG0109R002SDS015C00	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	pg/g	2.84	NJ	23
LWG0102R001SDS015C00	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	pg/g	1.11	NJ	23
LWG0103R003SDS015C10	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	pg/g	0.32	NJ	23, L
LWG0103R004SDS015C11	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	pg/g	0.927	NJ	23
LWG0103R005SDS015C00	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	pg/g	4.21	NJ	23
LWG0106R002SDS015C10	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	pg/g	60.7	NJ	23
LWG0106R002SDS015C20	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	pg/g	34.4	NJ	23
LWG0106R002SDS015C31	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	pg/g	30.6	NJ	23
LWG0106R002SDS015C32	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	pg/g	22.1	NJ	23
LWG0106R004SDS015C00	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	pg/g	0.699	NJ	23, L
LWG0108R003SDS015C00	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	pg/g	0.55	NJ	23, L
LWG0109R002SDS015C00	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	pg/g	3.14	NJ	23

Table E-19. Qualified Data for Dioxins and Furans in Sediment Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0102R001SDS015C00	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	pg/g	2.76	NJ	23
LWG0103R003SDS015C10	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	pg/g	0.275	NJ	23, L
LWG0103R004SDS015C11	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	pg/g	0.981	NJ	23
LWG0103R005SDS015C00	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	pg/g	5.56	NJ	23
LWG0106R002SDS015C10	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	pg/g	38.4	NJ	23
LWG0106R002SDS015C20	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	pg/g	58.8	NJ	23
LWG0106R002SDS015C31	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	pg/g	22.5	NJ	23
LWG0106R002SDS015C32	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	pg/g	17.7	NJ	23
LWG0106R004SDS015C00	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	pg/g	2.17	NJ	23
LWG0108R003SDS015C00	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	pg/g	0.373	NJ	23, L
LWG0109R002SDS015C00	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	pg/g	1.93	NJ	23
LWG0102R001SDS015C00	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/g	0.252	NJ	23
LWG0103R003SDS015C10	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/g	0.107	UJ	7,23
LWG0103R004SDS015C11	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/g	0.274	NJ	23
LWG0103R005SDS015C00	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/g	0.72	NJ	23
LWG0106R002SDS015C10	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/g	1.53	NJ	23
LWG0106R002SDS015C20	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/g	1.46	NJ	23
LWG0106R002SDS015C31	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/g	1.05	NJ	23
LWG0106R002SDS015C32	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/g	1.28	NJ	23
LWG0106R004SDS015C00	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/g	0.202	NJ	23
LWG0108R003SDS015C00	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/g	0.135	UJ	7,23
LWG0109R002SDS015C00	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	pg/g	0.493	NJ	23
LWG0102R001SDS015C00	38998-75-3	Heptachlorodibenzofuran	pg/g	71.1	NJ	23
LWG0103R003SDS015C10	38998-75-3	Heptachlorodibenzofuran	pg/g	38.2	NJ	23
LWG0103R004SDS015C11	38998-75-3	Heptachlorodibenzofuran	pg/g	144	NJ	23
LWG0103R005SDS015C00	38998-75-3	Heptachlorodibenzofuran	pg/g	347	NJ	23
LWG0106R002SDS015C10	38998-75-3	Heptachlorodibenzofuran	pg/g	300	NJ	23
LWG0106R002SDS015C20	38998-75-3	Heptachlorodibenzofuran	pg/g	966	NJ	23
LWG0106R002SDS015C31	38998-75-3	Heptachlorodibenzofuran	pg/g	237	NJ	23
LWG0106R002SDS015C32	38998-75-3	Heptachlorodibenzofuran	pg/g	227	NJ	23
LWG0106R004SDS015C00	38998-75-3	Heptachlorodibenzofuran	pg/g	28.6	NJ	23
LWG0108R003SDS015C00	38998-75-3	Heptachlorodibenzofuran	pg/g	41.2	NJ	23
LWG0109R002SDS015C00	38998-75-3	Heptachlorodibenzofuran	pg/g	236	NJ	23
LWG0102R001SDS015C00	37871-00-4	Heptachlorodibenzo-p-dioxin	pg/g	366	NJ	23
LWG0103R003SDS015C10	37871-00-4	Heptachlorodibenzo-p-dioxin	pg/g	115	NJ	23
LWG0103R004SDS015C11	37871-00-4	Heptachlorodibenzo-p-dioxin	pg/g	296	NJ	23
LWG0103R005SDS015C00	37871-00-4	Heptachlorodibenzo-p-dioxin	pg/g	984	NJ	23
LWG0106R002SDS015C10	37871-00-4	Heptachlorodibenzo-p-dioxin	pg/g	692	NJ	23
LWG0106R002SDS015C20	37871-00-4	Heptachlorodibenzo-p-dioxin	pg/g	1010	NJ	23
LWG0106R002SDS015C31	37871-00-4	Heptachlorodibenzo-p-dioxin	pg/g	532	NJ	23
LWG0106R002SDS015C32	37871-00-4	Heptachlorodibenzo-p-dioxin	pg/g	811	NJ	23
LWG0106R004SDS015C00	37871-00-4	Heptachlorodibenzo-p-dioxin	pg/g	168	NJ	23
LWG0108R003SDS015C00	37871-00-4	Heptachlorodibenzo-p-dioxin	pg/g	100	NJ	23

Table E-19. Qualified Data for Dioxins and Furans in Sediment Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0109R002SDS015C00	37871-00-4	Heptachlorodibenzo-p-dioxin	pg/g	969	NJ	23
LWG0102R001SDS015C00	55684-94-1	Hexachlorodibenzofuran	pg/g	34.2	NJ	23
LWG0103R003SDS015C10	55684-94-1	Hexachlorodibenzofuran	pg/g	14.4	NJ	23
LWG0103R004SDS015C11	55684-94-1	Hexachlorodibenzofuran	pg/g	41.2	NJ	23
LWG0103R005SDS015C00	55684-94-1	Hexachlorodibenzofuran	pg/g	184	NJ	23
LWG0106R002SDS015C10	55684-94-1	Hexachlorodibenzofuran	pg/g	2040	NJ	23
LWG0106R002SDS015C20	55684-94-1	Hexachlorodibenzofuran	pg/g	1280	NJ	23
LWG0106R002SDS015C31	55684-94-1	Hexachlorodibenzofuran	pg/g	981	NJ	23
LWG0106R002SDS015C32	55684-94-1	Hexachlorodibenzofuran	pg/g	743	NJ	23
LWG0106R004SDS015C00	55684-94-1	Hexachlorodibenzofuran	pg/g	26	NJ	23
LWG0108R003SDS015C00	55684-94-1	Hexachlorodibenzofuran	pg/g	19.5	NJ	23
LWG0109R002SDS015C00	55684-94-1	Hexachlorodibenzofuran	pg/g	113	NJ	23
LWG0102R001SDS015C00	34465-46-8	Hexachlorodibenzo-p-dioxin	pg/g	40.4	NJ	23
LWG0103R003SDS015C10	34465-46-8	Hexachlorodibenzo-p-dioxin	pg/g	14.2	NJ	23
LWG0103R004SDS015C11	34465-46-8	Hexachlorodibenzo-p-dioxin	pg/g	32.1	NJ	23
LWG0103R005SDS015C00	34465-46-8	Hexachlorodibenzo-p-dioxin	pg/g	124	NJ	23
LWG0106R002SDS015C10	34465-46-8	Hexachlorodibenzo-p-dioxin	pg/g	313	NJ	23
LWG0106R002SDS015C20	34465-46-8	Hexachlorodibenzo-p-dioxin	pg/g	330	NJ	23
LWG0106R002SDS015C31	34465-46-8	Hexachlorodibenzo-p-dioxin	pg/g	246	NJ	23
LWG0106R002SDS015C32	34465-46-8	Hexachlorodibenzo-p-dioxin	pg/g	255	NJ	23
LWG0106R004SDS015C00	34465-46-8	Hexachlorodibenzo-p-dioxin	pg/g	19	NJ	23
LWG0108R003SDS015C00	34465-46-8	Hexachlorodibenzo-p-dioxin	pg/g	15.5	NJ	23
LWG0109R002SDS015C00	34465-46-8	Hexachlorodibenzo-p-dioxin	pg/g	123	NJ	23
LWG0102R001SDS015C00	39001-02-0	Octachlorodibenzofuran	pg/g	63.1	NJ	23
LWG0103R003SDS015C10	39001-02-0	Octachlorodibenzofuran	pg/g	35.6	NJ	23
LWG0103R004SDS015C11	39001-02-0	Octachlorodibenzofuran	pg/g	163	NJ	23
LWG0103R005SDS015C00	39001-02-0	Octachlorodibenzofuran	pg/g	280	NJ	23
LWG0106R002SDS015C10	39001-02-0	Octachlorodibenzofuran	pg/g	109	NJ	23
LWG0106R002SDS015C20	39001-02-0	Octachlorodibenzofuran	pg/g	828	NJ	23
LWG0106R002SDS015C31	39001-02-0	Octachlorodibenzofuran	pg/g	122	NJ	23
LWG0106R002SDS015C32	39001-02-0	Octachlorodibenzofuran	pg/g	113	NJ	23
LWG0106R004SDS015C00	39001-02-0	Octachlorodibenzofuran	pg/g	25.3	NJ	23
LWG0108R003SDS015C00	39001-02-0	Octachlorodibenzofuran	pg/g	29.7	NJ	23
LWG0109R002SDS015C00	39001-02-0	Octachlorodibenzofuran	pg/g	232	NJ	23
LWG0102R001SDS015C00	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	1070	NJ	23
LWG0103R003SDS015C10	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	482	NJ	23
LWG0103R004SDS015C11	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	1360	NJ	23
LWG0103R005SDS015C00	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	4220	NJ	23
LWG0106R002SDS015C10	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	2140	NJ	23
LWG0106R002SDS015C20	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	4370	NJ	23
LWG0106R002SDS015C31	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	1660	NJ	23
LWG0106R002SDS015C32	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	2180	NJ	23
LWG0106R004SDS015C00	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	383	NJ	23

Table E-19. Qualified Data for Dioxins and Furans in Sediment Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0108R003SDS015C00	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	490	NJ	23
LWG0109R002SDS015C00	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	3670	NJ	23
LWG0102R001SDS015C00	30402-15-4	Pentachlorodibenzofuran	pg/g	24.8	NJ	23
LWG0103R003SDS015C10	30402-15-4	Pentachlorodibenzofuran	pg/g	5.76	NJ	23
LWG0103R004SDS015C11	30402-15-4	Pentachlorodibenzofuran	pg/g	23.1	NJ	23
LWG0103R005SDS015C00	30402-15-4	Pentachlorodibenzofuran	pg/g	147	NJ	23
LWG0106R002SDS015C10	30402-15-4	Pentachlorodibenzofuran	pg/g	3430	NJ	23
LWG0106R002SDS015C20	30402-15-4	Pentachlorodibenzofuran	pg/g	1650	NJ	23
LWG0106R002SDS015C31	30402-15-4	Pentachlorodibenzofuran	pg/g	1840	NJ	23
LWG0106R002SDS015C32	30402-15-4	Pentachlorodibenzofuran	pg/g	1350	NJ	23
LWG0106R004SDS015C00	30402-15-4	Pentachlorodibenzofuran	pg/g	22.4	NJ	23
LWG0108R003SDS015C00	30402-15-4	Pentachlorodibenzofuran	pg/g	12	NJ	23
LWG0109R002SDS015C00	30402-15-4	Pentachlorodibenzofuran	pg/g	54.6	NJ	23
LWG0102R001SDS015C00	36088-22-9	Pentachlorodibenzo-p-dioxin	pg/g	4.33	NJ	23
LWG0103R003SDS015C10	36088-22-9	Pentachlorodibenzo-p-dioxin	pg/g	0.749	NJ	23
LWG0103R004SDS015C11	36088-22-9	Pentachlorodibenzo-p-dioxin	pg/g	3.67	NJ	23
LWG0103R005SDS015C00	36088-22-9	Pentachlorodibenzo-p-dioxin	pg/g	19.6	NJ	23
LWG0106R002SDS015C10	36088-22-9	Pentachlorodibenzo-p-dioxin	pg/g	139	NJ	23
LWG0106R002SDS015C20	36088-22-9	Pentachlorodibenzo-p-dioxin	pg/g	141	NJ	23
LWG0106R002SDS015C31	36088-22-9	Pentachlorodibenzo-p-dioxin	pg/g	99.6	NJ	23
LWG0106R002SDS015C32	36088-22-9	Pentachlorodibenzo-p-dioxin	pg/g	103	NJ	23
LWG0106R004SDS015C00	36088-22-9	Pentachlorodibenzo-p-dioxin	pg/g	5.33	NJ	23
LWG0108R003SDS015C00	36088-22-9	Pentachlorodibenzo-p-dioxin	pg/g	1.84	NJ	23
LWG0109R002SDS015C00	36088-22-9	Pentachlorodibenzo-p-dioxin	pg/g	14.8	NJ	23
LWG0102R001SDS015C00	30402-14-3	Tetrachlorodibenzofuran	pg/g	25.2	NJ	23
LWG0103R003SDS015C10	30402-14-3	Tetrachlorodibenzofuran	pg/g	2.14	NJ	23
LWG0103R004SDS015C11	30402-14-3	Tetrachlorodibenzofuran	pg/g	10.2	NJ	23
LWG0103R005SDS015C00	30402-14-3	Tetrachlorodibenzofuran	pg/g	96.3	NJ	23
LWG0106R002SDS015C10	30402-14-3	Tetrachlorodibenzofuran	pg/g	537	NJ	23
LWG0106R002SDS015C20	30402-14-3	Tetrachlorodibenzofuran	pg/g	362	NJ	23
LWG0106R002SDS015C31	30402-14-3	Tetrachlorodibenzofuran	pg/g	454	NJ	23
LWG0106R002SDS015C32	30402-14-3	Tetrachlorodibenzofuran	pg/g	319	NJ	23
LWG0106R004SDS015C00	30402-14-3	Tetrachlorodibenzofuran	pg/g	28.4	NJ	23
LWG0108R003SDS015C00	30402-14-3	Tetrachlorodibenzofuran	pg/g	5.98	NJ	23
LWG0109R002SDS015C00	30402-14-3	Tetrachlorodibenzofuran	pg/g	21.3	NJ	23
LWG0102R001SDS015C00	41903-57-5	Tetrachlorodibenzo-p-dioxin	pg/g	5.58	NJ	23
LWG0103R003SDS015C10	41903-57-5	Tetrachlorodibenzo-p-dioxin	pg/g	1.25	NJ	23
LWG0103R004SDS015C11	41903-57-5	Tetrachlorodibenzo-p-dioxin	pg/g	3.32	NJ	23
LWG0103R005SDS015C00	41903-57-5	Tetrachlorodibenzo-p-dioxin	pg/g	13.2	NJ	23
LWG0106R002SDS015C10	41903-57-5	Tetrachlorodibenzo-p-dioxin	pg/g	43.1	NJ	23
LWG0106R002SDS015C20	41903-57-5	Tetrachlorodibenzo-p-dioxin	pg/g	46.1	NJ	23
LWG0106R002SDS015C31	41903-57-5	Tetrachlorodibenzo-p-dioxin	pg/g	27.6	NJ	23
LWG0106R002SDS015C32	41903-57-5	Tetrachlorodibenzo-p-dioxin	pg/g	34.5	NJ	23

Table E-19. Qualified Data for Dioxins and Furans in Sediment Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0106R004SDS015C00	41903-57-5	Tetrachlorodibenzo-p-dioxin	pg/g	114	NJ	23
LWG0108R003SDS015C00	41903-57-5	Tetrachlorodibenzo-p-dioxin	pg/g	2.11	NJ	23
LWG0109R002SDS015C00	41903-57-5	Tetrachlorodibenzo-p-dioxin	pg/g	6.73	NJ	23

Notes:

[a] Rejected data are not included in this summary.

[b] Qualifiers and data qualifier reason codes are defined in Table X-1.

Table E-20. Qualified Data for Metals in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0102R001TSSPWBC00	7429-90-5	Aluminum	mg/kg	19.8	J		23,16
LWG0102R015TSSPWBC00	7429-90-5	Aluminum	mg/kg	23.6	J		23,16
LWG0103R002TSSPWBC20	7429-90-5	Aluminum	mg/kg	21.5	J		23,16
LWG0103R004TSSPWBC10	7429-90-5	Aluminum	mg/kg	12.5	J		23,16
LWG0103R004TSSPWBC20	7429-90-5	Aluminum	mg/kg	10.1	J		23,16
LWG0103R005TSSPWBC00	7429-90-5	Aluminum	mg/kg	22.2	J		23,16
LWG0103R014TSLSWBC10	7429-90-5	Aluminum	mg/kg	150	J		8,15,16
LWG0103R014TSLSWBC20	7429-90-5	Aluminum	mg/kg	76.9	J		8
LWG0103R014TSNPWBC10	7429-90-5	Aluminum	mg/kg	0.8	UJ		7,23
LWG0103R014TSNPWBC20	7429-90-5	Aluminum	mg/kg	0.7	UJ		7,23
LWG0103R014TSSBFLC00	7429-90-5	Aluminum	mg/kg	3.4	J		23,16
LWG0103R014TSSBWBC00	7429-90-5	Aluminum	mg/kg	2.12	J		16,23
LWG0103R032TSSPWBC00	7429-90-5	Aluminum	mg/kg	12	J		23,16
LWG0103R034TSSPWBC00	7429-90-5	Aluminum	mg/kg	12.7	J		23,16
LWG0104R002TSSPWBC00	7429-90-5	Aluminum	mg/kg	12.1	J		23,16
LWG0104R003TSSPWBC00	7429-90-5	Aluminum	mg/kg	46.5	U		23,16
LWG0104R004TSSPWBC00	7429-90-5	Aluminum	mg/kg	30.9	U		23,16
LWG0104R023TSSBWBC10	7429-90-5	Aluminum	mg/kg	4.64	J		23,16
LWG0104R023TSSBWBC20	7429-90-5	Aluminum	mg/kg	2.46	J		23,16
LWG0104R023TSSBWBC30	7429-90-5	Aluminum	mg/kg	11	J		23,16
LWG0105R006TSLSWBC00	7429-90-5	Aluminum	mg/kg	140	J		8
LWG0105R006TSNPWBC00	7429-90-5	Aluminum	mg/kg	1	UJ		7,23
LWG0105R006TSSBFLC00	7429-90-5	Aluminum	mg/kg	3.83	J		23,16
LWG0105R006TSSBWBC00	7429-90-5	Aluminum	mg/kg	2.71	J		23,16
LWG0105R020TSSPWBC00	7429-90-5	Aluminum	mg/kg	14.1	U		23,16
LWG0106R001TSSPWBC00	7429-90-5	Aluminum	mg/kg	33.8	J		23,16
LWG0106R024TSSBFLC00	7429-90-5	Aluminum	mg/kg	7.15	J		23,16
LWG0106R024TSSBWBC00	7429-90-5	Aluminum	mg/kg	5.55	J		23,16
LWG0107R006TSCRWBC00	7429-90-5	Aluminum	mg/kg	58.7	J		8
LWG0107R009TSLSWBC00	7429-90-5	Aluminum	mg/kg	111	J		8
LWG0107R009TSNPWBC00	7429-90-5	Aluminum	mg/kg	1.4	J		23
LWG0107R009TSSBWBC10	7429-90-5	Aluminum	mg/kg	4.74	J		23,16
LWG0107R009TSSBWBC20	7429-90-5	Aluminum	mg/kg	4.72	J		23,16
LWG0107R009TSSBWBC30	7429-90-5	Aluminum	mg/kg	6.14	J		23,16
LWG0108R001TSCRWBC00	7429-90-5	Aluminum	mg/kg	68.4	J		8
LWG0108R002TSCRWBC00	7429-90-5	Aluminum	mg/kg	86.7	J		8
LWG0108R003TSCRWBC00	7429-90-5	Aluminum	mg/kg	67.1	J		8
LWG0108R010TSLSWBC00	7429-90-5	Aluminum	mg/kg	154	J		8
LWG0108R010TSNPWBC00	7429-90-5	Aluminum	mg/kg	1.5	J		23
LWG0108R010TSSBWBC10	7429-90-5	Aluminum	mg/kg	7.67	J		23,16
LWG0108R010TSSBWBC20	7429-90-5	Aluminum	mg/kg	6.63	J		23,16
LWG0108R010TSSBWBC30	7429-90-5	Aluminum	mg/kg	4.77	J		23,16
LWG0108R032TSSBFLC00	7429-90-5	Aluminum	mg/kg	3.52	J		23,16
LWG0108R032TSSBWBC00	7429-90-5	Aluminum	mg/kg	4.78	J		23,16
LWG0109R001TSCRWBC10	7429-90-5	Aluminum	mg/kg	35	J		8
LWG0109R001TSCRWBC20	7429-90-5	Aluminum	mg/kg	67.8	J		8

Table E-20. Qualified Data for Metals in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0109R002TSCRWBC00	7429-90-5	Aluminum	mg/kg	66	J		8
LWG0109R006TSLSWBC00	7429-90-5	Aluminum	mg/kg	133	J		8
LWG0109R006TSNPWBC00	7429-90-5	Aluminum	mg/kg	2.8	J		23
LWG0109R006TSPMWBC00	7429-90-5	Aluminum	mg/kg	15.1	J		23
LWG0109R006TSSBFLC00	7429-90-5	Aluminum	mg/kg	2.54	J		23,16
LWG0109R006TSSBWBC00	7429-90-5	Aluminum	mg/kg	10.2	J		23,16
LWG01FZ0306TSBBFLC10	7429-90-5	Aluminum	mg/kg	2.66	J		23,16
LWG01FZ0306TSBBFLC20	7429-90-5	Aluminum	mg/kg	3.5	J		23,16
LWG01FZ0306TSBBFLC30	7429-90-5	Aluminum	mg/kg	1.95	J		23,16
LWG01FZ0306TSBBWBC10	7429-90-5	Aluminum	mg/kg	4.9	J		23
LWG01FZ0306TSBBWBC20	7429-90-5	Aluminum	mg/kg	4.9	J		23
LWG01FZ0306TSBBWBC30	7429-90-5	Aluminum	mg/kg	5.1	J		23
LWG01FZ0306TSBCFLC10	7429-90-5	Aluminum	mg/kg	6.29	J		23,16
LWG01FZ0306TSBCFLC20	7429-90-5	Aluminum	mg/kg	7.03	J		23,16
LWG01FZ0306TSBCWBC10	7429-90-5	Aluminum	mg/kg	8.43	J		23,16
LWG01FZ0306TSBCWBC20	7429-90-5	Aluminum	mg/kg	5.8	J		23,16
LWG01FZ0306TSCPFLC10	7429-90-5	Aluminum	mg/kg	1.65	J		23,16
LWG01FZ0306TSCPFLC20	7429-90-5	Aluminum	mg/kg	1.16	J		23,16
LWG01FZ0306TSCPFLC30	7429-90-5	Aluminum	mg/kg	2.68	J		23,16
LWG01FZ0609TSBBFLC10	7429-90-5	Aluminum	mg/kg	10.6	J		23,16
LWG01FZ0609TSBBFLC20	7429-90-5	Aluminum	mg/kg	8.19	J		23,16
LWG01FZ0609TSBBFLC30	7429-90-5	Aluminum	mg/kg	5.84	J		23,16
LWG01FZ0609TSBBWBC10	7429-90-5	Aluminum	mg/kg	31.7	J		23
LWG01FZ0609TSBBWBC20	7429-90-5	Aluminum	mg/kg	8	J		23
LWG01FZ0609TSBBWBC30	7429-90-5	Aluminum	mg/kg	4.2	J		23
LWG01FZ0609TSBCFLC10	7429-90-5	Aluminum	mg/kg	4.57	J		23,16
LWG01FZ0609TSBCFLC20	7429-90-5	Aluminum	mg/kg	3.23	J		23,16
LWG01FZ0609TSCPFLC10	7429-90-5	Aluminum	mg/kg	1.88	J		23,16
LWG01FZ0609TSCPFLC20	7429-90-5	Aluminum	mg/kg	2.11	J		23,16
LWG01FZ0609TSCPFLC30	7429-90-5	Aluminum	mg/kg	1.17	J		23,16
LWG0102R001TSCRWBC00	7440-36-0	Antimony	mg/kg	0.007	J		19, L
LWG0102R015TSCRWBC00	7440-36-0	Antimony	mg/kg	0.009	J		19, L
LWG0102R015TSSPWBC00	7440-36-0	Antimony	mg/kg	0.004	U		7
LWG0103R001TSCRWBC00	7440-36-0	Antimony	mg/kg	0.007	J		19, L
LWG0103R002TSCRWBC00	7440-36-0	Antimony	mg/kg	0.006	J		19, L
LWG0103R002TSSPWBC10	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG0103R003TSCRWBC00	7440-36-0	Antimony	mg/kg	0.006	J		19, L
LWG0103R004TSCRWBC00	7440-36-0	Antimony	mg/kg	0.014	J		19
LWG0103R004TSSPWBC10	7440-36-0	Antimony	mg/kg	0.002	U		7
LWG0103R004TSSPWBC20	7440-36-0	Antimony	mg/kg	0.002	U		7
LWG0103R005TSCRWBC00	7440-36-0	Antimony	mg/kg	0.015	J		19
LWG0103R005TSSPWBC00	7440-36-0	Antimony	mg/kg	0.002	U		7
LWG0103R014TSNPWBC10	7440-36-0	Antimony	mg/kg	0.002	U		7
LWG0103R014TSPMWBC00	7440-36-0	Antimony	mg/kg	0.003	U		7
LWG0103R014TSSBFLC00	7440-36-0	Antimony	mg/kg	0.002	U		7
LWG0103R032TSCRWBC00	7440-36-0	Antimony	mg/kg	0.006	J		19, L

Table E-20. Qualified Data for Metals in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0104R002TSCRWBC00	7440-36-0	Antimony	mg/kg	0.01	J		19, L
LWG0104R002TSSPWBC00	7440-36-0	Antimony	mg/kg	0.003	U		7
LWG0104R003TSCRWBC00	7440-36-0	Antimony	mg/kg	0.01	J		19, L
LWG0104R003TSSPWBC00	7440-36-0	Antimony	mg/kg	0.003	U		7
LWG0104R004TSCRWBC10	7440-36-0	Antimony	mg/kg	0.006	J		19, L
LWG0104R004TSCRWBC20	7440-36-0	Antimony	mg/kg	0.01	J		19, L
LWG0104R004TSSPWBC00	7440-36-0	Antimony	mg/kg	0.009	U		7
LWG0105R001TSCRWBC00	7440-36-0	Antimony	mg/kg	0.006	J		19, L
LWG0105R003TSCRWBC00	7440-36-0	Antimony	mg/kg	0.02	J		19
LWG0105R006TSNPWBC00	7440-36-0	Antimony	mg/kg	0.002	U		7
LWG0105R006TSPMWBC00	7440-36-0	Antimony	mg/kg	0.003	U		7
LWG0105R006TSSBFLC00	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG0106R001TSCRWBC00	7440-36-0	Antimony	mg/kg	0.004	UJ		7,19
LWG0106R002TSSPWBC10	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG0106R004TSCRWBC10	7440-36-0	Antimony	mg/kg	0.006	J		19, L
LWG0106R004TSCRWBC20	7440-36-0	Antimony	mg/kg	0.006	J		19, L
LWG0106R024TSSBFLC00	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG0106R031TSCRWBC00	7440-36-0	Antimony	mg/kg	0.006	J		19, L
LWG0107R003TSCRWBC00	7440-36-0	Antimony	mg/kg	0.005	UJ		7,19
LWG0107R003TSSPWBC00	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG0107R004TSCRWBC00	7440-36-0	Antimony	mg/kg	0.009	J		19, L
LWG0107R006TSSPWBC00	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG0107R009TSNPWBC00	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG0107R009TSSBWBC30	7440-36-0	Antimony	mg/kg	0.004	U		7
LWG0108R001TSSPWBC00	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG0108R003TSSPWBC00	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG0108R010TSNPWBC00	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG0108R010TSPMWBC00	7440-36-0	Antimony	mg/kg	0.005	U		7
LWG0108R010TSSBWBC10	7440-36-0	Antimony	mg/kg	0.002	U		7
LWG0108R010TSSBWBC20	7440-36-0	Antimony	mg/kg	0.003	U		7
LWG0108R010TSSBWBC30	7440-36-0	Antimony	mg/kg	0.002	U		7
LWG0108R032TSSBFLC00	7440-36-0	Antimony	mg/kg	0.002	U		7
LWG0108R032TSSBWBC00	7440-36-0	Antimony	mg/kg	0.003	U		7
LWG0109R001TSSPWBC00	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG0109R002TSSPWBC00	7440-36-0	Antimony	mg/kg	0.002	U		7
LWG0109R006TSPMWBC00	7440-36-0	Antimony	mg/kg	0.005	U		7
LWG0109R006TSSBFLC00	7440-36-0	Antimony	mg/kg	0.003	U		7
LWG0109R006TSSBWBC00	7440-36-0	Antimony	mg/kg	0.003	U		7
LWG01FZ0306TSBBWBC20	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG01FZ0306TSBCWBC20	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG01FZ0306TSCPWBC10	7440-36-0	Antimony	mg/kg	0.002	U		7
LWG01FZ0306TSCPWBC20	7440-36-0	Antimony	mg/kg	0.002	U		7
LWG01FZ0306TSCPWBC30	7440-36-0	Antimony	mg/kg	0.003	U		7
LWG01FZ0609TSBBWBC10	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG01FZ0609TSCPWBC10	7440-36-0	Antimony	mg/kg	0.004	U		7
LWG01FZ0609TSCPWBC20	7440-36-0	Antimony	mg/kg	0.002	U		7

Table E-20. Qualified Data for Metals in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0609TSCPWBC30	7440-36-0	Antimony	mg/kg	0.001	U		7
LWG0102R001TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.37	J		19
LWG0102R015TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.4	J		19
LWG0103R001TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.35	J		19
LWG0103R002TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.41	J		19
LWG0103R003TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.38	J		19
LWG0103R004TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.36	J		19
LWG0103R005TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.3	J		19
LWG0103R032TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.45	J		19
LWG0104R002TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.41	J		19
LWG0104R003TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.37	J		19
LWG0104R004TSCRWBC10	7440-38-2	Arsenic	mg/kg	0.39	J		19
LWG0104R004TSCRWBC20	7440-38-2	Arsenic	mg/kg	0.35	J		19
LWG0105R001TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.35	J		19
LWG0105R003TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.35	J		19
LWG0106R001TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.32	J		19
LWG0106R004TSCRWBC10	7440-38-2	Arsenic	mg/kg	0.38	J		19
LWG0106R004TSCRWBC20	7440-38-2	Arsenic	mg/kg	0.35	J		19
LWG0106R031TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.26	J		19
LWG0107R003TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.3	J		19
LWG0107R004TSCRWBC00	7440-38-2	Arsenic	mg/kg	0.5	J		19
LWG0102R001TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.028	J		19
LWG0102R015TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.017	J		19
LWG0103R001TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.016	J		19
LWG0103R002TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.018	J		19
LWG0103R003TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.029	J		19
LWG0103R004TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.02	J		19
LWG0103R005TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.03	J		19
LWG0103R014TSLSWBC10	7440-43-9	Cadmium	mg/kg	0.023	J		9
LWG0103R014TSLSWBC20	7440-43-9	Cadmium	mg/kg	0.017	J		9
LWG0103R014TSSBWBC00	7440-43-9	Cadmium	mg/kg	0.008	J		9, L
LWG0103R032TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.012	J		19, L
LWG0104R002TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.026	J		19
LWG0104R003TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.025	J		19
LWG0104R004TSCRWBC10	7440-43-9	Cadmium	mg/kg	0.013	J		19
LWG0104R004TSCRWBC20	7440-43-9	Cadmium	mg/kg	0.012	J		19
LWG0104R023TSSBWBC10	7440-43-9	Cadmium	mg/kg	0.003	J		9, L
LWG0104R023TSSBWBC20	7440-43-9	Cadmium	mg/kg	0.004	J		9, L
LWG0104R023TSSBWBC30	7440-43-9	Cadmium	mg/kg	0.008	J		9, L
LWG0105R001TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.009	J		19, L
LWG0105R003TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.036	J		19
LWG0105R006TSLSWBC00	7440-43-9	Cadmium	mg/kg	0.02	J		9
LWG0105R006TSSBWBC00	7440-43-9	Cadmium	mg/kg	0.008	J		9, L
LWG0106R001TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.011	J		19, L
LWG0106R004TSCRWBC10	7440-43-9	Cadmium	mg/kg	0.017	J		19
LWG0106R004TSCRWBC20	7440-43-9	Cadmium	mg/kg	0.02	J		19

Table E-20. Qualified Data for Metals in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0106R024TSSBWBC00	7440-43-9	Cadmium	mg/kg	0.024	J		9
LWG0106R031TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.007	J		19, L
LWG0107R003TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.015	J		19
LWG0107R004TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.016	J		19
LWG0107R006TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.009	J		9, L
LWG0107R009TSLSWBC00	7440-43-9	Cadmium	mg/kg	0.016	J		9
LWG0107R009TSSBWBC10	7440-43-9	Cadmium	mg/kg	0.002	J		9, L
LWG0108R001TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.013	J		9, L
LWG0108R002TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.013	J		9, L
LWG0108R003TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.016	J		9
LWG0108R010TSLSWBC00	7440-43-9	Cadmium	mg/kg	0.017	J		9
LWG0109R001TSCRWBC10	7440-43-9	Cadmium	mg/kg	0.02	J		9
LWG0109R001TSCRWBC20	7440-43-9	Cadmium	mg/kg	0.023	J		9
LWG0109R002TSCRWBC00	7440-43-9	Cadmium	mg/kg	0.011	J		9, L
LWG0109R006TSLSWBC00	7440-43-9	Cadmium	mg/kg	0.015	J		9
LWG0102R001TSCRWBC00	7440-50-8	Copper	mg/kg	12.5	J	N	8,16,19
LWG0102R015TSCRWBC00	7440-50-8	Copper	mg/kg	11.2	J	N	8,16,19
LWG0103R001TSCRWBC00	7440-50-8	Copper	mg/kg	12.3	J	N	8,16,19
LWG0103R002TSCRWBC00	7440-50-8	Copper	mg/kg	14.7	J	N	8,16,19
LWG0103R003TSCRWBC00	7440-50-8	Copper	mg/kg	17	J	N	8,16,19
LWG0103R004TSCRWBC00	7440-50-8	Copper	mg/kg	15.8	J	N	8,16,19
LWG0103R005TSCRWBC00	7440-50-8	Copper	mg/kg	11.8	J	N	8,16,19
LWG0103R032TSCRWBC00	7440-50-8	Copper	mg/kg	13.1	J	N	8,16,19
LWG0104R002TSCRWBC00	7440-50-8	Copper	mg/kg	16.4	J	N	8,16,19
LWG0104R003TSCRWBC00	7440-50-8	Copper	mg/kg	15.4	J	N	8,16,19
LWG0104R004TSCRWBC10	7440-50-8	Copper	mg/kg	11.9	J	N	8,16,19
LWG0104R004TSCRWBC20	7440-50-8	Copper	mg/kg	11.5	J	N	8,16,19
LWG0105R001TSCRWBC00	7440-50-8	Copper	mg/kg	13.1	J	N	8,16,19
LWG0105R003TSCRWBC00	7440-50-8	Copper	mg/kg	16.9	J	N	8,16,19
LWG0106R001TSCRWBC00	7440-50-8	Copper	mg/kg	14.9	J	N	8,16,19
LWG0106R004TSCRWBC10	7440-50-8	Copper	mg/kg	16.4	J	N	8,16,19
LWG0106R004TSCRWBC20	7440-50-8	Copper	mg/kg	14.2	J	N	8,16,19
LWG0106R031TSCRWBC00	7440-50-8	Copper	mg/kg	11.4	J	N	8,16,19
LWG0107R003TSCRWBC00	7440-50-8	Copper	mg/kg	13.8	J	N	8,16,19
LWG0107R004TSCRWBC00	7440-50-8	Copper	mg/kg	17.6	J	N	8,16,19
LWG0102R001TSCRWBC00	7439-92-1	Lead	mg/kg	0.059	J	*	9,16,19
LWG0102R001TSSPWBC00	7439-92-1	Lead	mg/kg	0.0837	J	*	9
LWG0102R015TSCRWBC00	7439-92-1	Lead	mg/kg	0.078	J	*	9,16,19
LWG0102R015TSSPWBC00	7439-92-1	Lead	mg/kg	0.181	J	*	9
LWG0103R001TSCRWBC00	7439-92-1	Lead	mg/kg	0.069	J	*	9,16,19
LWG0103R002TSCRWBC00	7439-92-1	Lead	mg/kg	0.044	J	*	9,16,19
LWG0103R002TSSPWBC20	7439-92-1	Lead	mg/kg	0.0241	J	*	9
LWG0103R003TSCRWBC00	7439-92-1	Lead	mg/kg	0.088	J	*	9,16,19
LWG0103R004TSCRWBC00	7439-92-1	Lead	mg/kg	0.1	J	*	9,16,19
LWG0103R004TSSPWBC10	7439-92-1	Lead	mg/kg	0.0681	J	*	9
LWG0103R004TSSPWBC20	7439-92-1	Lead	mg/kg	0.131	J	*	9

Table E-20. Qualified Data for Metals in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R005TSCRWBC00	7439-92-1	Lead	mg/kg	0.154	J	*	9,16,19
LWG0103R005TSSPWBC00	7439-92-1	Lead	mg/kg	0.0791	J	*	9
LWG0103R014TSNPWBC10	7439-92-1	Lead	mg/kg	0.007	U		7
LWG0103R014TSNPWBC20	7439-92-1	Lead	mg/kg	0.006	U		7
LWG0103R014TSSBFLC00	7439-92-1	Lead	mg/kg	0.003	U		7
LWG0103R032TSCRWBC00	7439-92-1	Lead	mg/kg	0.041	J	*	9,16,19
LWG0103R032TSSPWBC00	7439-92-1	Lead	mg/kg	0.0149	J	*	9
LWG0103R034TSSPWBC00	7439-92-1	Lead	mg/kg	0.0348	J	*	9
LWG0104R002TSCRWBC00	7439-92-1	Lead	mg/kg	0.989	J	*	9,16,19
LWG0104R002TSSPWBC00	7439-92-1	Lead	mg/kg	0.96	J	*	9
LWG0104R003TSCRWBC00	7439-92-1	Lead	mg/kg	0.229	J	*	9,16,19
LWG0104R003TSSPWBC00	7439-92-1	Lead	mg/kg	0.255	J	*	9
LWG0104R004TSCRWBC10	7439-92-1	Lead	mg/kg	0.097	J	*	9,16,19
LWG0104R004TSCRWBC20	7439-92-1	Lead	mg/kg	0.107	J	*	9,16,19
LWG0104R004TSSPWBC00	7439-92-1	Lead	mg/kg	0.365	U	*	9
LWG0105R001TSCRWBC00	7439-92-1	Lead	mg/kg	0.083	J	*	9,16,19
LWG0105R003TSCRWBC00	7439-92-1	Lead	mg/kg	0.11	J	*	9,16,19
LWG0105R020TSSPWBC00	7439-92-1	Lead	mg/kg	0.0203	J	*	9
LWG0106R001TSCRWBC00	7439-92-1	Lead	mg/kg	0.071	J	*	9,16,19
LWG0106R001TSSPWBC00	7439-92-1	Lead	mg/kg	0.0521	J	*	9
LWG0106R004TSCRWBC10	7439-92-1	Lead	mg/kg	0.088	J	*	9,16,19
LWG0106R004TSCRWBC20	7439-92-1	Lead	mg/kg	0.082	J	*	9,16,19
LWG0106R024TSSBFLC00	7439-92-1	Lead	mg/kg	0.002	U		7
LWG0106R031TSCRWBC00	7439-92-1	Lead	mg/kg	0.077	J	*	9,16,19
LWG0107R003TSCRWBC00	7439-92-1	Lead	mg/kg	0.091	J	*	9,16,19
LWG0107R004TSCRWBC00	7439-92-1	Lead	mg/kg	0.202	J	*	9,16,19
LWG0107R009TSSBWBC20	7439-92-1	Lead	mg/kg	0.0401	J	*	9
LWG0107R009TSSBWBC30	7439-92-1	Lead	mg/kg	0.0051	J	*	9, L
LWG0108R010TSSBWBC10	7439-92-1	Lead	mg/kg	0.0075	J	*	9
LWG0108R010TSSBWBC20	7439-92-1	Lead	mg/kg	0.303	J	*	9
LWG0108R010TSSBWBC30	7439-92-1	Lead	mg/kg	0.133	J	*	9
LWG0108R032TSSBFLC00	7439-92-1	Lead	mg/kg	0.004	U		7
LWG0108R032TSSBWBC00	7439-92-1	Lead	mg/kg	0.0048	J	*	9, L
LWG0109R006TSSBFLC00	7439-92-1	Lead	mg/kg	0.003	U		7
LWG0109R006TSSBWBC00	7439-92-1	Lead	mg/kg	0.0109	J	*	9
LWG01FZ0306TSBBFLC10	7439-92-1	Lead	mg/kg	0.002	U		7
LWG01FZ0306TSBBFLC20	7439-92-1	Lead	mg/kg	0.002	U		7
LWG01FZ0306TSBBFLC30	7439-92-1	Lead	mg/kg	0.002	U		7
LWG01FZ0306TSBCFLC10	7439-92-1	Lead	mg/kg	0.002	U		7
LWG01FZ0306TSBCFLC20	7439-92-1	Lead	mg/kg	0.005	U		7
LWG01FZ0306TSBCWBC10	7439-92-1	Lead	mg/kg	0.004	UJ		7,9
LWG01FZ0306TSBCWBC20	7439-92-1	Lead	mg/kg	0.023	J		9
LWG01FZ0306TSCPFLC10	7439-92-1	Lead	mg/kg	0.008	U		7
LWG01FZ0306TSCPFLC20	7439-92-1	Lead	mg/kg	0.004	U		7
LWG01FZ0306TSCPWBC10	7439-92-1	Lead	mg/kg	0.17	J		10
LWG01FZ0306TSCPWBC20	7439-92-1	Lead	mg/kg	0.148	J		10

Table E-20. Qualified Data for Metals in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0306TSCPWBC30	7439-92-1	Lead	mg/kg	0.132	J		10
LWG01FZ0609TSBBFLC10	7439-92-1	Lead	mg/kg	0.005	U		7
LWG01FZ0609TSBBFLC20	7439-92-1	Lead	mg/kg	0.003	U		7
LWG01FZ0609TSBBFLC30	7439-92-1	Lead	mg/kg	0.008	U		7
LWG01FZ0609TSBBWBC30	7439-92-1	Lead	mg/kg	0.014	U		7
LWG01FZ0609TSBCFLC10	7439-92-1	Lead	mg/kg	0.001	U		7
LWG01FZ0609TSBCFLC20	7439-92-1	Lead	mg/kg	0.001	U		7
LWG01FZ0609TSBCWBC10	7439-92-1	Lead	mg/kg	0.005	UJ		7,9
LWG01FZ0609TSBCWBC20	7439-92-1	Lead	mg/kg	0.007	UJ		7,9
LWG01FZ0609TSCPFLC20	7439-92-1	Lead	mg/kg	0.005	U		7
LWG01FZ0609TSCPFLC30	7439-92-1	Lead	mg/kg	0.004	U		7
LWG01FZ0609TSCPWBC10	7439-92-1	Lead	mg/kg	0.202	J		10
LWG01FZ0609TSCPWBC20	7439-92-1	Lead	mg/kg	0.121	J		10
LWG01FZ0609TSCPWBC30	7439-92-1	Lead	mg/kg	0.122	J		10
LWG0103R014TSLSWBC10	7439-96-5	Manganese	mg/kg	10.7	J		16
LWG0103R014TSLSWBC20	7439-96-5	Manganese	mg/kg	11.9	J		16
LWG0103R014TSSBWBC00	7439-96-5	Manganese	mg/kg	1.06	J		16
LWG0104R023TSSBWBC10	7439-96-5	Manganese	mg/kg	0.986	J		16
LWG0104R023TSSBWBC20	7439-96-5	Manganese	mg/kg	0.87	J		16
LWG0104R023TSSBWBC30	7439-96-5	Manganese	mg/kg	0.881	J		16
LWG0105R006TSLSWBC00	7439-96-5	Manganese	mg/kg	13.4	J		16
LWG0105R006TSSBWBC00	7439-96-5	Manganese	mg/kg	1.37	J		16
LWG0106R024TSSBWBC00	7439-96-5	Manganese	mg/kg	0.445	J		16
LWG0107R009TSLSWBC00	7439-96-5	Manganese	mg/kg	13	J		16
LWG0107R009TSSBWBC10	7439-96-5	Manganese	mg/kg	1.35	J		16
LWG0108R010TSLSWBC00	7439-96-5	Manganese	mg/kg	11.9	J		16
LWG0109R006TSLSWBC00	7439-96-5	Manganese	mg/kg	12.2	J		16
LWG01FZ0306TSBCFLC10	7439-96-5	Manganese	mg/kg	0.168	J		9
LWG01FZ0306TSBCFLC20	7439-96-5	Manganese	mg/kg	0.142	J		9
LWG01FZ0609TSBCFLC10	7439-96-5	Manganese	mg/kg	0.083	J		9
LWG01FZ0609TSBCFLC20	7439-96-5	Manganese	mg/kg	0.09	J		9
LWG01FZ0609TSCPFLC10	7439-96-5	Manganese	mg/kg	0.318	J		9
LWG01FZ0609TSCPFLC30	7439-96-5	Manganese	mg/kg	0.208	J		9
LWG0102R001TSCRWBC00	7440-02-0	Nickel	mg/kg	0.54	J		19
LWG0102R015TSCRWBC00	7440-02-0	Nickel	mg/kg	0.47	J		19
LWG0103R001TSCRWBC00	7440-02-0	Nickel	mg/kg	0.3	J		19
LWG0103R002TSCRWBC00	7440-02-0	Nickel	mg/kg	0.36	J		19
LWG0103R003TSCRWBC00	7440-02-0	Nickel	mg/kg	0.42	J		19
LWG0103R004TSCRWBC00	7440-02-0	Nickel	mg/kg	0.4	J		19
LWG0103R004TSSPWBC10	7440-02-0	Nickel	mg/kg	0.13	U		7
LWG0103R004TSSPWBC20	7440-02-0	Nickel	mg/kg	0.08	U		7
LWG0103R005TSCRWBC00	7440-02-0	Nickel	mg/kg	0.3	J		19
LWG0103R014TSNPWBC10	7440-02-0	Nickel	mg/kg	0.2	J		16
LWG0103R014TSNPWBC20	7440-02-0	Nickel	mg/kg	0.333	J		16
LWG0103R014TSPMWBC00	7440-02-0	Nickel	mg/kg	0.482	J		16
LWG0103R032TSCRWBC00	7440-02-0	Nickel	mg/kg	0.38	J		19

Table E-20. Qualified Data for Metals in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R032TSSPWBC00	7440-02-0	Nickel	mg/kg	0.09	U		7
LWG0104R002TSCRWBC00	7440-02-0	Nickel	mg/kg	0.27	J		19
LWG0104R002TSSPWBC00	7440-02-0	Nickel	mg/kg	0.09	U		7
LWG0104R003TSCRWBC00	7440-02-0	Nickel	mg/kg	0.25	UJ		7,19
LWG0104R004TSCRWBC10	7440-02-0	Nickel	mg/kg	0.39	J		19
LWG0104R004TSCRWBC20	7440-02-0	Nickel	mg/kg	0.22	J		19
LWG0104R004TSSPWBC00	7440-02-0	Nickel	mg/kg	0.13	U		7
LWG0105R001TSCRWBC00	7440-02-0	Nickel	mg/kg	0.29	J		19
LWG0105R003TSCRWBC00	7440-02-0	Nickel	mg/kg	0.59	J		19
LWG0105R006TSNPWBC00	7440-02-0	Nickel	mg/kg	0.181	J		16
LWG0105R006TSPMWBC00	7440-02-0	Nickel	mg/kg	0.448	J		16
LWG0105R020TSSPWBC00	7440-02-0	Nickel	mg/kg	0.12	U		7
LWG0106R001TSCRWBC00	7440-02-0	Nickel	mg/kg	0.51	J		19
LWG0106R002TSSPWBC20	7440-02-0	Nickel	mg/kg	0.311	J		16
LWG0106R004TSCRWBC10	7440-02-0	Nickel	mg/kg	0.5	J		19
LWG0106R004TSCRWBC20	7440-02-0	Nickel	mg/kg	0.41	J		19
LWG0106R004TSSPWBC00	7440-02-0	Nickel	mg/kg	0.374	J		16
LWG0106R031TSCRWBC00	7440-02-0	Nickel	mg/kg	0.45	J		19
LWG0107R003TSCRWBC00	7440-02-0	Nickel	mg/kg	0.3	J		19
LWG0107R003TSSPWBC00	7440-02-0	Nickel	mg/kg	0.398	J		16
LWG0107R004TSCRWBC00	7440-02-0	Nickel	mg/kg	0.55	J		19
LWG0107R006TSSPWBC00	7440-02-0	Nickel	mg/kg	0.386	J		16
LWG0107R009TSNPWBC00	7440-02-0	Nickel	mg/kg	0.461	J		16
LWG0107R009TSSBWBC20	7440-02-0	Nickel	mg/kg	0.03	U		7
LWG0107R009TSSBWBC30	7440-02-0	Nickel	mg/kg	0.02	U		7
LWG0108R001TSSPWBC00	7440-02-0	Nickel	mg/kg	0.338	J		16
LWG0108R002TSSPWBC00	7440-02-0	Nickel	mg/kg	0.354	J		16
LWG0108R003TSSPWBC00	7440-02-0	Nickel	mg/kg	0.352	J		16
LWG0108R010TSNPWBC00	7440-02-0	Nickel	mg/kg	0.303	J		16
LWG0108R010TSPMWBC00	7440-02-0	Nickel	mg/kg	0.345	J		16
LWG0108R010TSSBWBC10	7440-02-0	Nickel	mg/kg	0.07	U		7
LWG0108R010TSSBWBC20	7440-02-0	Nickel	mg/kg	0.07	U		7
LWG0108R010TSSBWBC30	7440-02-0	Nickel	mg/kg	0.06	U		7
LWG0108R032TSSBWBC00	7440-02-0	Nickel	mg/kg	0.02	U		7
LWG0109R001TSSPWBC00	7440-02-0	Nickel	mg/kg	0.34	J		16
LWG0109R006TSNPWBC00	7440-02-0	Nickel	mg/kg	0.119	J		16
LWG0109R006TSPMWBC00	7440-02-0	Nickel	mg/kg	0.27	J		16
LWG0109R006TSSBWBC00	7440-02-0	Nickel	mg/kg	0.04	U		7
LWG01FZ0306TSBBWBC10	7440-02-0	Nickel	mg/kg	0.213	J		16
LWG01FZ0306TSBBWBC20	7440-02-0	Nickel	mg/kg	0.29	J		16
LWG01FZ0306TSBBWBC30	7440-02-0	Nickel	mg/kg	0.321	J		16
LWG01FZ0306TSBCWBC10	7440-02-0	Nickel	mg/kg	0.338	J		16
LWG01FZ0306TSBCWBC20	7440-02-0	Nickel	mg/kg	0.355	J		16
LWG01FZ0306TSCPWBC10	7440-02-0	Nickel	mg/kg	0.834	J		16
LWG01FZ0306TSCPWBC20	7440-02-0	Nickel	mg/kg	1.37	J		16
LWG01FZ0306TSCPWBC30	7440-02-0	Nickel	mg/kg	0.75	J		16

Table E-20. Qualified Data for Metals in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0609TSBBWBC10	7440-02-0	Nickel	mg/kg	0.328	UJ		7,16
LWG01FZ0609TSBBWBC20	7440-02-0	Nickel	mg/kg	0.261	J		16
LWG01FZ0609TSBBWBC30	7440-02-0	Nickel	mg/kg	0.236	J		16
LWG01FZ0609TSBCWBC10	7440-02-0	Nickel	mg/kg	0.347	J		16
LWG01FZ0609TSBCWBC20	7440-02-0	Nickel	mg/kg	0.357	J		16
LWG01FZ0609TSCPWBC10	7440-02-0	Nickel	mg/kg	0.569	J		16
LWG01FZ0609TSCPWBC20	7440-02-0	Nickel	mg/kg	0.545	J		16
LWG01FZ0609TSCPWBC30	7440-02-0	Nickel	mg/kg	0.386	J		16
LWG0103R014TSSBFLC00	7782-49-2	Selenium	mg/kg	0.3	U		7
LWG01FZ0306TSBCFLC10	7782-49-2	Selenium	mg/kg	0.3	U		7
LWG01FZ0306TSBCFLC20	7782-49-2	Selenium	mg/kg	0.3	U		7
LWG01FZ0306TSBCWBC10	7782-49-2	Selenium	mg/kg	0.3	U		7
LWG01FZ0306TSCPFLC10	7782-49-2	Selenium	mg/kg	0.3	U		7
LWG01FZ0306TSCPFLC20	7782-49-2	Selenium	mg/kg	0.3	U		7
LWG01FZ0306TSCPFLC30	7782-49-2	Selenium	mg/kg	0.3	U		7
LWG01FZ0609TSBCFLC10	7782-49-2	Selenium	mg/kg	0.3	U		7
LWG01FZ0609TSBCFLC20	7782-49-2	Selenium	mg/kg	0.4	U		7
LWG01FZ0609TSCPFLC10	7782-49-2	Selenium	mg/kg	0.5	U		7
LWG01FZ0609TSCPFLC20	7782-49-2	Selenium	mg/kg	0.4	U		7
LWG01FZ0609TSCPFLC30	7782-49-2	Selenium	mg/kg	0.4	U		7
LWG0102R001TSCRWBC00	7440-22-4	Silver	mg/kg	0.0271	J		19
LWG0102R001TSSPWBC00	7440-22-4	Silver	mg/kg	0.001	U		7
LWG0102R015TSCRWBC00	7440-22-4	Silver	mg/kg	0.0264	J		19
LWG0102R015TSSPWBC00	7440-22-4	Silver	mg/kg	0.001	U		7
LWG0103R001TSCRWBC00	7440-22-4	Silver	mg/kg	0.0291	J		19
LWG0103R001TSSPWBC00	7440-22-4	Silver	mg/kg	0.0024	U		7
LWG0103R002TSCRWBC00	7440-22-4	Silver	mg/kg	0.0293	J		19
LWG0103R002TSSPWBC10	7440-22-4	Silver	mg/kg	0.0027	U		7
LWG0103R002TSSPWBC20	7440-22-4	Silver	mg/kg	0.002	U		7
LWG0103R003TSCRWBC00	7440-22-4	Silver	mg/kg	0.0422	J		19
LWG0103R004TSCRWBC00	7440-22-4	Silver	mg/kg	0.0455	J		19
LWG0103R004TSSPWBC10	7440-22-4	Silver	mg/kg	0.001	U		7
LWG0103R004TSSPWBC20	7440-22-4	Silver	mg/kg	0.001	U		7
LWG0103R005TSCRWBC00	7440-22-4	Silver	mg/kg	0.0154	J		19
LWG0103R005TSSPWBC00	7440-22-4	Silver	mg/kg	0.001	U		7
LWG0103R014TSLSWBC10	7440-22-4	Silver	mg/kg	0.0003	UJ		7
LWG0103R014TSLSWBC20	7440-22-4	Silver	mg/kg	0.0074	UJ		7
LWG0103R014TSNPWBC10	7440-22-4	Silver	mg/kg	0.0014	U		7
LWG0103R014TSNPWBC20	7440-22-4	Silver	mg/kg	0.0017	U		7
LWG0103R014TSPMWBC00	7440-22-4	Silver	mg/kg	0.0043	U		7
LWG0103R014TSSBFLC00	7440-22-4	Silver	mg/kg	0.0002	U		7
LWG0103R014TSSBWBC00	7440-22-4	Silver	mg/kg	0.0011	UJ		7
LWG0103R032TSCRWBC00	7440-22-4	Silver	mg/kg	0.0347	J		19
LWG0103R032TSSPWBC00	7440-22-4	Silver	mg/kg	0.004	U		7
LWG0103R034TSSPWBC00	7440-22-4	Silver	mg/kg	0.002	U		7
LWG0104R002TSCRWBC00	7440-22-4	Silver	mg/kg	0.0464	J		19

Table E-20. Qualified Data for Metals in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0104R002TSSPWBC00	7440-22-4	Silver	mg/kg	0.002	U		7
LWG0104R003TSCRWBC00	7440-22-4	Silver	mg/kg	0.0472	J		19
LWG0104R003TSSPWBC00	7440-22-4	Silver	mg/kg	0.002	U		7
LWG0104R004TSCRWBC10	7440-22-4	Silver	mg/kg	0.0315	J		19
LWG0104R004TSCRWBC20	7440-22-4	Silver	mg/kg	0.0241	J		19
LWG0104R004TSSPWBC00	7440-22-4	Silver	mg/kg	0.002	U		7
LWG0104R023TSSBWBC10	7440-22-4	Silver	mg/kg	0.0036	UJ		7
LWG0104R023TSSBWBC20	7440-22-4	Silver	mg/kg	0.0053	UJ		7
LWG0104R023TSSBWBC30	7440-22-4	Silver	mg/kg	0.0037	UJ		7
LWG0105R001TSCRWBC00	7440-22-4	Silver	mg/kg	0.0281	J		19
LWG0105R001TSSPWBC00	7440-22-4	Silver	mg/kg	0.0029	U		7
LWG0105R003TSCRWBC00	7440-22-4	Silver	mg/kg	0.0238	J		19
LWG0105R006TSLSWBC00	7440-22-4	Silver	mg/kg	0.004	UJ		7
LWG0105R006TSNPWBC00	7440-22-4	Silver	mg/kg	0.0052	U		7
LWG0105R006TSPMWBC00	7440-22-4	Silver	mg/kg	0.0041	U		7
LWG0105R006TSSBWBC00	7440-22-4	Silver	mg/kg	0.0046	UJ		7
LWG0105R020TSSPWBC00	7440-22-4	Silver	mg/kg	0.003	U		7
LWG0106R001TSCRWBC00	7440-22-4	Silver	mg/kg	0.0318	J		19
LWG0106R001TSSPWBC00	7440-22-4	Silver	mg/kg	0.003	U		7
LWG0106R002TSSPWBC10	7440-22-4	Silver	mg/kg	0.0007	U		7
LWG0106R002TSSPWBC20	7440-22-4	Silver	mg/kg	0.0016	U		7
LWG0106R004TSCRWBC10	7440-22-4	Silver	mg/kg	0.0306	J		19
LWG0106R004TSCRWBC20	7440-22-4	Silver	mg/kg	0.03	J		19
LWG0106R004TSSPWBC00	7440-22-4	Silver	mg/kg	0.0015	U		7
LWG0106R031TSCRWBC00	7440-22-4	Silver	mg/kg	0.0262	J		19
LWG0107R003TSCRWBC00	7440-22-4	Silver	mg/kg	0.019	J		19
LWG0107R003TSSPWBC00	7440-22-4	Silver	mg/kg	0.0009	U		7
LWG0107R004TSCRWBC00	7440-22-4	Silver	mg/kg	0.0389	J		19
LWG0107R006TSSPWBC00	7440-22-4	Silver	mg/kg	0.0011	U		7
LWG0107R009TSLSWBC00	7440-22-4	Silver	mg/kg	0.006	UJ		7
LWG0107R009TSNPWBC00	7440-22-4	Silver	mg/kg	0.0019	U		7
LWG0107R009TSSBWBC10	7440-22-4	Silver	mg/kg	0.0055	UJ		7
LWG0107R009TSSBWBC20	7440-22-4	Silver	mg/kg	0.004	U		7
LWG0107R009TSSBWBC30	7440-22-4	Silver	mg/kg	0.007	U		7
LWG0108R001TSSPWBC00	7440-22-4	Silver	mg/kg	0.0029	U		7
LWG0108R002TSCRWBC00	7440-22-4	Silver	mg/kg	0.0164	UJ		7
LWG0108R003TSSPWBC00	7440-22-4	Silver	mg/kg	0.0008	U		7
LWG0108R010TSLSWBC00	7440-22-4	Silver	mg/kg	0.0069	UJ		7
LWG0108R010TSNPWBC00	7440-22-4	Silver	mg/kg	0.0013	U		7
LWG0108R010TSPMWBC00	7440-22-4	Silver	mg/kg	0.0039	U		7
LWG0108R010TSSBWBC10	7440-22-4	Silver	mg/kg	0.003	U		7
LWG0108R010TSSBWBC20	7440-22-4	Silver	mg/kg	0.004	U		7
LWG0108R010TSSBWBC30	7440-22-4	Silver	mg/kg	0.004	U		7
LWG0108R032TSSBFLC00	7440-22-4	Silver	mg/kg	0.0003	U		7
LWG0108R032TSSBWBC00	7440-22-4	Silver	mg/kg	0.004	U		7
LWG0109R001TSCRWBC10	7440-22-4	Silver	mg/kg	0.0181	UJ		7

Table E-20. Qualified Data for Metals in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0109R001TSSPWBC00	7440-22-4	Silver	mg/kg	0.0016	U		7
LWG0109R002TSSPWBC00	7440-22-4	Silver	mg/kg	0.0012	U		7
LWG0109R006TSLSWBC00	7440-22-4	Silver	mg/kg	0.0074	UJ		7
LWG0109R006TSNPWBC00	7440-22-4	Silver	mg/kg	0.0014	U		7
LWG0109R006TSPMWBC00	7440-22-4	Silver	mg/kg	0.001	U		7
LWG0109R006TSSBWBC00	7440-22-4	Silver	mg/kg	0.003	U		7
LWG01FZ0306TSBBWBC10	7440-22-4	Silver	mg/kg	0.0021	U		7
LWG01FZ0306TSBBWBC20	7440-22-4	Silver	mg/kg	0.0021	U		7
LWG01FZ0306TSBBWBC30	7440-22-4	Silver	mg/kg	0.0022	U		7
LWG01FZ0306TSBCWBC10	7440-22-4	Silver	mg/kg	0.002	U		7
LWG01FZ0306TSBCWBC20	7440-22-4	Silver	mg/kg	0.0022	U		7
LWG01FZ0306TSCPFLC20	7440-22-4	Silver	mg/kg	0.0002	U		7
LWG01FZ0306TSCPWBC20	7440-22-4	Silver	mg/kg	0.0052	U		7
LWG01FZ0609TSBBWBC20	7440-22-4	Silver	mg/kg	0.0027	U		7
LWG01FZ0609TSBBWBC30	7440-22-4	Silver	mg/kg	0.0022	U		7
LWG01FZ0609TSBCWBC10	7440-22-4	Silver	mg/kg	0.0004	U		7
LWG01FZ0609TSBCWBC20	7440-22-4	Silver	mg/kg	0.0006	U		7
LWG01FZ0609TSCPFLC20	7440-22-4	Silver	mg/kg	0.0006	U		7
LWG01FZ0609TSCPWBC30	7440-22-4	Silver	mg/kg	0.0053	U		7
LWG0102R001TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0079	J		19
LWG0102R015TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0068	J		19
LWG0103R001TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0054	J		19
LWG0103R002TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0052	J		19, L
LWG0103R003TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0051	J		19
LWG0103R004TSCRWBC00	7440-28-0	Thallium	mg/kg	0.003	J		19, L
LWG0103R005TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0021	J		19, L
LWG0103R032TSCRWBC00	7440-28-0	Thallium	mg/kg	0.004	J		19, L
LWG0104R002TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0025	J		19, L
LWG0104R003TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0024	J		19, L
LWG0104R004TSCRWBC10	7440-28-0	Thallium	mg/kg	0.0031	J		19, L
LWG0104R004TSCRWBC20	7440-28-0	Thallium	mg/kg	0.0025	J		19, L
LWG0105R001TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0025	J		19, L
LWG0105R003TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0033	J		19, L
LWG0106R001TSCRWBC00	7440-28-0	Thallium	mg/kg	0.002	J		19, L
LWG0106R004TSCRWBC10	7440-28-0	Thallium	mg/kg	0.0032	J		19, L
LWG0106R004TSCRWBC20	7440-28-0	Thallium	mg/kg	0.0037	J		19, L
LWG0106R031TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0028	J		19, L
LWG0107R003TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0024	J		19, L
LWG0107R004TSCRWBC00	7440-28-0	Thallium	mg/kg	0.0032	J		19, L
LWG0107R009TSNPWBC00	7440-28-0	Thallium	mg/kg	0.0012	U		7
LWG0109R002TSSPWBC00	7440-28-0	Thallium	mg/kg	0.0018	U		7
LWG01FZ0609TSBBWBC10	7440-28-0	Thallium	mg/kg	0.0018	U		7
LWG01FZ0609TSBBWBC20	7440-28-0	Thallium	mg/kg	0.0018	U		7
LWG0102R001TSCRWBC00	7440-66-6	Zinc	mg/kg	16.6	J		16,19
LWG0102R015TSCRWBC00	7440-66-6	Zinc	mg/kg	15.9	J		16,19
LWG0103R001TSCRWBC00	7440-66-6	Zinc	mg/kg	17.6	J		16,19

Table E-20. Qualified Data for Metals in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R002TSCRWBC00	7440-66-6	Zinc	mg/kg	17.5	J		16,19
LWG0103R003TSCRWBC00	7440-66-6	Zinc	mg/kg	19.8	J		16,19
LWG0103R004TSCRWBC00	7440-66-6	Zinc	mg/kg	18.2	J		16,19
LWG0103R005TSCRWBC00	7440-66-6	Zinc	mg/kg	14.8	J		16,19
LWG0103R014TSSBFLC00	7440-66-6	Zinc	mg/kg	8	J		16
LWG0103R032TSCRWBC00	7440-66-6	Zinc	mg/kg	17.4	J		16,19
LWG0104R002TSCRWBC00	7440-66-6	Zinc	mg/kg	18	J		16,19
LWG0104R003TSCRWBC00	7440-66-6	Zinc	mg/kg	17	J		16,19
LWG0104R004TSCRWBC10	7440-66-6	Zinc	mg/kg	15.7	J		16,19
LWG0104R004TSCRWBC20	7440-66-6	Zinc	mg/kg	13.7	J		16,19
LWG0105R001TSCRWBC00	7440-66-6	Zinc	mg/kg	15.9	J		16,19
LWG0105R003TSCRWBC00	7440-66-6	Zinc	mg/kg	18.9	J		16,19
LWG0105R006TSSBFLC00	7440-66-6	Zinc	mg/kg	10.9	J		16
LWG0106R001TSCRWBC00	7440-66-6	Zinc	mg/kg	15	J		16,19
LWG0106R004TSCRWBC10	7440-66-6	Zinc	mg/kg	18.2	J		16,19
LWG0106R004TSCRWBC20	7440-66-6	Zinc	mg/kg	20.3	J		16,19
LWG0106R024TSSBFLC00	7440-66-6	Zinc	mg/kg	8.38	J		16
LWG0106R031TSCRWBC00	7440-66-6	Zinc	mg/kg	16.2	J		16,19
LWG0107R003TSCRWBC00	7440-66-6	Zinc	mg/kg	16	J		16,19
LWG0107R004TSCRWBC00	7440-66-6	Zinc	mg/kg	19.1	J		16,19
LWG0108R032TSSBFLC00	7440-66-6	Zinc	mg/kg	8.67	J		16
LWG0109R006TSSBFLC00	7440-66-6	Zinc	mg/kg	9.6	J		16
LWG01FZ0306TSBBFLC10	7440-66-6	Zinc	mg/kg	5.51	J		16
LWG01FZ0306TSBBFLC20	7440-66-6	Zinc	mg/kg	6.49	J		16
LWG01FZ0306TSBBFLC30	7440-66-6	Zinc	mg/kg	4.75	J		16
LWG01FZ0306TSCPFLC10	7440-66-6	Zinc	mg/kg	29.8	J		16
LWG01FZ0306TSCPFLC20	7440-66-6	Zinc	mg/kg	17.4	J		16
LWG01FZ0306TSCPFLC30	7440-66-6	Zinc	mg/kg	23.8	J		16
LWG01FZ0609TSBBFLC10	7440-66-6	Zinc	mg/kg	5.32	J		16
LWG01FZ0609TSBBFLC20	7440-66-6	Zinc	mg/kg	5.32	J		16
LWG01FZ0609TSBBFLC30	7440-66-6	Zinc	mg/kg	3.96	J		16
LWG01FZ0609TSCPFLC20	7440-66-6	Zinc	mg/kg	25.3	J		16

Notes:

[a] Rejected data are not included in this summary.

[b] Qualifiers, laboratory flags, and data qualifier reason codes are defined in Table X-1.

[c] Laboratory flags are only included when they describe quality control exceedances that resulted in qualification of data.

Table E-21. Qualified Data for Semivolatile Organic Compounds in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0104R004TSSPWBC00	4901-51-3	2,3,4,5-Tetrachlorophenol	ug/kg	1700	UJ		10
LWG0108R003TSSPWBC00	4901-51-3	2,3,4,5-Tetrachlorophenol	ug/kg	1700	UJ		10
LWG01FZ0609TSBBWBC10	935-95-5	2,3,5,6-Tetrachlorophenol	ug/kg	1600	UJ		5
LWG01FZ0609TSBBWBC20	935-95-5	2,3,5,6-Tetrachlorophenol	ug/kg	1600	UJ		5
LWG0108R010TSPMWBC00	789-02-6	2,4'-DDT	ug/kg	6.9	UJ		I-23
LWG0103R002TSSPWBC20	51-28-5	2,4-Dinitrophenol	ug/kg	3200	UJ		10
LWG0103R014TSLSWBC10	51-28-5	2,4-Dinitrophenol	ug/kg	2600	UJ		5
LWG0105R006TSLSWBC00	51-28-5	2,4-Dinitrophenol	ug/kg	3200	UJ		5
LWG0106R002TSSPWBC10	51-28-5	2,4-Dinitrophenol	ug/kg	3300	UJ		5
LWG0107R009TSLSWBC00	51-28-5	2,4-Dinitrophenol	ug/kg	2600	UJ		5
LWG0108R010TSLSWBC00	51-28-5	2,4-Dinitrophenol	ug/kg	3000	UJ		5
LWG0109R006TSLSWBC00	51-28-5	2,4-Dinitrophenol	ug/kg	2600	UJ		5
LWG0102R001TSSPWBC00	121-14-2	2,4-Dinitrotoluene	ug/kg	61	UJ		5
LWG0102R015TSSPWBC00	121-14-2	2,4-Dinitrotoluene	ug/kg	65	UJ		5
LWG0103R004TSSPWBC10	121-14-2	2,4-Dinitrotoluene	ug/kg	66	UJ		5
LWG0103R004TSSPWBC20	121-14-2	2,4-Dinitrotoluene	ug/kg	63	UJ		5
LWG0103R005TSSPWBC00	121-14-2	2,4-Dinitrotoluene	ug/kg	60	UJ		5
LWG0103R032TSSPWBC00	121-14-2	2,4-Dinitrotoluene	ug/kg	57	UJ		5
LWG0103R034TSSPWBC00	121-14-2	2,4-Dinitrotoluene	ug/kg	62	UJ		5
LWG0104R002TSSPWBC00	121-14-2	2,4-Dinitrotoluene	ug/kg	59	UJ		5
LWG0104R003TSSPWBC00	121-14-2	2,4-Dinitrotoluene	ug/kg	64	UJ		5
LWG0105R020TSSPWBC00	121-14-2	2,4-Dinitrotoluene	ug/kg	62	UJ		5
LWG0106R001TSSPWBC00	121-14-2	2,4-Dinitrotoluene	ug/kg	54	UJ		5
LWG0109R001TSSPWBC00	121-14-2	2,4-Dinitrotoluene	ug/kg	27	UJ		5
LWG0106R031TSCRWBC00	88-75-5	2-Nitrophenol	ug/kg	1600	UJ		13
LWG0106R002TSSPWBC20	91-94-1	3,3'-Dichlorobenzidine	ug/kg	1600	UJ		5
LWG0106R004TSSPWBC00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	1500	UJ		5
LWG0107R003TSSPWBC00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	1400	UJ		5
LWG0107R006TSSPWBC00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	1500	UJ		5
LWG0108R001TSSPWBC00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	1400	UJ		5
LWG0108R002TSSPWBC00	91-94-1	3,3'-Dichlorobenzidine	ug/kg	1400	UJ		5
LWG0108R010TSPMWBC00	72-54-8	4,4'-DDD	ug/kg	35	J		I-23
LWG0108R010TSPMWBC00	72-55-9	4,4'-DDE	ug/kg	140	J		I-23
LWG0108R010TSPMWBC00	50-29-3	4,4'-DDT	ug/kg	6.3	UJ		I-23
LWG0107R003TSCRWBC00	106-47-8	4-Chloroaniline	ug/kg	170	UJ		10
LWG0107R004TSCRWBC00	106-47-8	4-Chloroaniline	ug/kg	190	UJ		10
LWG01FZ0306TSBBFLC10	106-47-8	4-Chloroaniline	ug/kg	170	UJ		10
LWG01FZ0306TSBBFLC20	106-47-8	4-Chloroaniline	ug/kg	170	UJ		10
LWG01FZ0306TSBBFLC30	106-47-8	4-Chloroaniline	ug/kg	170	UJ		10
LWG01FZ0306TSBBWBC10	106-47-8	4-Chloroaniline	ug/kg	170	UJ		10
LWG01FZ0306TSBBWBC20	106-47-8	4-Chloroaniline	ug/kg	170	UJ		10
LWG01FZ0306TSBBWBC30	106-47-8	4-Chloroaniline	ug/kg	170	UJ		10
LWG01FZ0609TSBBFLC10	106-47-8	4-Chloroaniline	ug/kg	170	UJ		10
LWG01FZ0609TSBBFLC20	106-47-8	4-Chloroaniline	ug/kg	170	UJ		10
LWG01FZ0609TSBBFLC30	106-47-8	4-Chloroaniline	ug/kg	170	UJ		10
LWG01FZ0609TSBBWBC10	106-47-8	4-Chloroaniline	ug/kg	160	UJ		10
LWG01FZ0609TSBBWBC20	106-47-8	4-Chloroaniline	ug/kg	160	UJ		10
LWG01FZ0609TSBBWBC30	106-47-8	4-Chloroaniline	ug/kg	170	UJ		10
LWG0103R003TSCRWBC00	106-44-5	4-Methylphenol	ug/kg	110	U	B	7

Table E-21. Qualified Data for Semivolatile Organic Compounds in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0104R003TSCRWBC00	106-44-5	4-Methylphenol	ug/kg	120	U	B	7
LWG0104R004TSCRWBC10	106-44-5	4-Methylphenol	ug/kg	110	U	B	7
LWG0104R004TSCRWBC20	106-44-5	4-Methylphenol	ug/kg	120	U	B	7
LWG0105R003TSCRWBC00	106-44-5	4-Methylphenol	ug/kg	120	U	B	7
LWG0106R004TSCRWBC20	106-44-5	4-Methylphenol	ug/kg	130	U	B	7
LWG0103R001TSSPWBC00	83-32-9	Acenaphthene	ug/kg	47	U	B	7
LWG0105R006TSLSWBC00	83-32-9	Acenaphthene	ug/kg	39	U	B	7
LWG0106R002TSSPWBC10	83-32-9	Acenaphthene	ug/kg	40	U	B	7
LWG0107R003TSCAWBC00	83-32-9	Acenaphthene	ug/kg	58	U	B	7
LWG0107R009TSLSWBC00	83-32-9	Acenaphthene	ug/kg	65	U	B	7
LWG0108R003TSCRWBC00	83-32-9	Acenaphthene	ug/kg	53	U	B	7
LWG0109R002TSSPWBC00	83-32-9	Acenaphthene	ug/kg	100	U	B	7
LWG0106R031TSCRWBC00	62-53-3	Aniline	ug/kg	1600	UJ		13
LWG0107R003TSCAWBC00	191-24-2	Benzo(g,h,i)perylene	ug/kg	81	U	B	7
LWG0107R003TSCRWBC00	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG0107R004TSCRWBC00	191-24-2	Benzo(g,h,i)perylene	ug/kg	37	UJ		10
LWG01FZ0306TSBBFLC10	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG01FZ0306TSBBFLC20	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG01FZ0306TSBBFLC30	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG01FZ0306TSBBWBC10	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG01FZ0306TSBBWBC20	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG01FZ0306TSBBWBC30	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG01FZ0609TSBBFLC10	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG01FZ0609TSBBFLC20	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG01FZ0609TSBBFLC30	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG01FZ0609TSBBWBC10	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG01FZ0609TSBBWBC20	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG01FZ0609TSBBWBC30	191-24-2	Benzo(g,h,i)perylene	ug/kg	33	UJ		10
LWG0106R031TSCRWBC00	65-85-0	Benzoic acid	ug/kg	8200	UJ		13
LWG0107R003TSCRWBC00	65-85-0	Benzoic acid	ug/kg	8300	UJ		10
LWG0107R004TSCRWBC00	65-85-0	Benzoic acid	ug/kg	9400	UJ		10
LWG01FZ0306TSBBFLC10	65-85-0	Benzoic acid	ug/kg	8300	UJ		10
LWG01FZ0306TSBBFLC20	65-85-0	Benzoic acid	ug/kg	8300	UJ		10
LWG01FZ0306TSBBFLC30	65-85-0	Benzoic acid	ug/kg	8300	UJ		10
LWG01FZ0306TSBBWBC10	65-85-0	Benzoic acid	ug/kg	8300	UJ		10
LWG01FZ0306TSBBWBC20	65-85-0	Benzoic acid	ug/kg	8300	UJ		10
LWG01FZ0306TSBBWBC30	65-85-0	Benzoic acid	ug/kg	8300	UJ		10
LWG01FZ0609TSBBFLC10	65-85-0	Benzoic acid	ug/kg	8300	UJ		10
LWG01FZ0609TSBBFLC20	65-85-0	Benzoic acid	ug/kg	8300	UJ		10
LWG01FZ0609TSBBFLC30	65-85-0	Benzoic acid	ug/kg	8300	UJ		10
LWG01FZ0609TSBBWBC10	65-85-0	Benzoic acid	ug/kg	8200	UJ		10
LWG01FZ0609TSBBWBC20	65-85-0	Benzoic acid	ug/kg	8200	UJ		10
LWG01FZ0609TSBBWBC30	65-85-0	Benzoic acid	ug/kg	8300	UJ		10
LWG0102R001TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10
LWG0102R015TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10
LWG0102R015TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	400	U	B	7
LWG0103R001TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	99	UJ		10
LWG0103R001TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	150	U	B	7
LWG0103R002TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10

Table E-21. Qualified Data for Semivolatile Organic Compounds in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R002TSSPWBC10	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	180	U	B	7
LWG0103R003TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10
LWG0103R004TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	150	UJ	B	7,10
LWG0103R004TSSPWBC10	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	810	U	B	7
LWG0103R004TSSPWBC20	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	140	U	B	7
LWG0103R005TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10
LWG0103R005TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	160	U	B	7
LWG0103R014TSSBWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	1300	U	B	7
LWG0103R032TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	170	UJ	B	7,10
LWG0103R034TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	150	U	B	7
LWG0104R002TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10
LWG0104R002TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	240	U	B	7
LWG0104R003TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10
LWG0104R003TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	260	U	B	7
LWG0104R004TSCRWBC10	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10
LWG0104R004TSCRWBC20	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	99	UJ		10
LWG0104R004TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	9400	J	BE	23
LWG0104R023TSSBWBC10	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	32000	J	BE	23
LWG0104R023TSSBWBC20	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	690	U	B	7
LWG0104R023TSSBWBC30	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	87000	J	BE	23
LWG0105R001TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	99	UJ		10
LWG0105R003TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10
LWG0105R020TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	170	U	B	7
LWG0106R001TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10
LWG0106R002TSCAWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	120	U	B	7
LWG0106R002TSSPWBC20	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	260	U	B	7
LWG0106R004TSCRWBC10	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10
LWG0106R004TSCRWBC20	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10
LWG0106R004TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	200	U	B	7
LWG0106R031TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	99	UJ		10
LWG0107R003TSCAWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	170	U	B	7
LWG0107R003TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	U	B	7
LWG0107R004TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	120	U	B	7
LWG0107R006TSCAWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	340	U	B	7
LWG0107R006TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	270	UJ	B	7,10
LWG0107R006TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	220	U	B	7
LWG0107R009TSSBWBC20	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	630	U	B	7
LWG0108R001TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	UJ		10
LWG0108R001TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	160	U	B	7
LWG0108R002TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	230	U	B	7
LWG0108R002TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	100	U	B	7
LWG0108R003TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	170	U	B	7
LWG0108R003TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	28000	J	BE	23
LWG0108R010TSLSWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	3000	J	BE	20
LWG0109R001TSCRWBC10	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	160	U	B	7
LWG0109R001TSCRWBC20	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	180	U	B	7
LWG0109R001TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	220	U	B	7
LWG0109R002TSCRWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	200	U	B	7
LWG0109R002TSSPWBC00	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	120	U	B	7

Table E-21. Qualified Data for Semivolatile Organic Compounds in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0609TSBBFLC20	117-81-7	Bis(2-ethylhexyl) phthalate	ug/kg	220	U	B	7
LWG0104R004TSSPWBC00	85-68-7	Butylbenzyl phthalate	ug/kg	330	UJ		5
LWG0108R003TSSPWBC00	85-68-7	Butylbenzyl phthalate	ug/kg	330	UJ		5
LWG0103R014TSLSWBC20	84-74-2	Dibutyl phthalate	ug/kg	520	U	B	7
LWG0106R002TSCAWBC00	84-74-2	Dibutyl phthalate	ug/kg	500	U	B	7
LWG0109R001TSCRWBC10	84-74-2	Dibutyl phthalate	ug/kg	500	U	MB	7
LWG0109R001TSCRWBC20	84-74-2	Dibutyl phthalate	ug/kg	500	U	MB	7
LWG0109R002TSCRWBC00	84-74-2	Dibutyl phthalate	ug/kg	500	U	MB	7
LWG0103R014TSLSWBC20	84-66-2	Diethyl phthalate	ug/kg	1600	U	B	7
LWG0107R003TSCRWBC00	84-66-2	Diethyl phthalate	ug/kg	170	UJ		5
LWG0107R004TSCRWBC00	84-66-2	Diethyl phthalate	ug/kg	190	UJ		5
LWG0108R002TSCRWBC00	84-66-2	Diethyl phthalate	ug/kg	270	U	B	7
LWG0108R003TSCRWBC00	84-66-2	Diethyl phthalate	ug/kg	950	U	B	7
LWG0109R001TSCRWBC10	84-66-2	Diethyl phthalate	ug/kg	280	U	B	7
LWG0109R001TSCRWBC20	84-66-2	Diethyl phthalate	ug/kg	270	U	B	7
LWG0109R002TSCRWBC00	84-66-2	Diethyl phthalate	ug/kg	190	U	MB	7
LWG0102R001TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	600	J		10
LWG0102R015TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	330	UJ		10
LWG0103R004TSSPWBC10	117-84-0	Di-n-octyl phthalate	ug/kg	330	UJ		10
LWG0103R004TSSPWBC20	117-84-0	Di-n-octyl phthalate	ug/kg	320	UJ		10
LWG0103R005TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	300	UJ		10
LWG0103R014TSLSWBC20	117-84-0	Di-n-octyl phthalate	ug/kg	1100	U	B	7
LWG0103R032TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	290	UJ		10
LWG0103R034TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	310	UJ		10
LWG0104R002TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	300	UJ		10
LWG0104R003TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	320	UJ		10
LWG0105R020TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	310	UJ		10
LWG0106R001TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	270	UJ		10
LWG0106R002TSSPWBC20	117-84-0	Di-n-octyl phthalate	ug/kg	330	UJ		10
LWG0106R004TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	300	UJ		10
LWG0107R003TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	290	UJ		10
LWG0107R006TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	300	UJ		10
LWG0108R001TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	290	UJ		10
LWG0108R002TSCRWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	1300	U	B	7
LWG0108R002TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	280	UJ		10
LWG0109R001TSSPWBC00	117-84-0	Di-n-octyl phthalate	ug/kg	270	UJ		10
LWG01FZ0306TSCPFLC30	72-20-8	Endrin	ug/kg	31	UJ		I-23
LWG0102R001TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0102R015TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0103R001TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0103R002TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0103R003TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0103R004TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0103R005TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0103R032TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0104R002TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0104R003TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0104R004TSCRWBC10	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0104R004TSCRWBC20	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10

Table E-21. Qualified Data for Semivolatile Organic Compounds in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0105R001TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0105R003TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0105R006TSSBWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	770	UJ		5
LWG0106R001TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0106R004TSCRWBC10	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0106R004TSCRWBC20	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0106R031TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0107R006TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0107R009TSSBWBC10	77-47-4	Hexachlorocyclopentadiene	ug/kg	710	UJ		5
LWG0107R009TSSBWBC20	77-47-4	Hexachlorocyclopentadiene	ug/kg	630	UJ		5
LWG0107R009TSSBWBC30	77-47-4	Hexachlorocyclopentadiene	ug/kg	820	UJ		5
LWG0108R001TSCRWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	830	UJ		10
LWG0108R010TSSBWBC10	77-47-4	Hexachlorocyclopentadiene	ug/kg	820	UJ		5
LWG0108R010TSSBWBC20	77-47-4	Hexachlorocyclopentadiene	ug/kg	800	UJ		5
LWG0108R010TSSBWBC30	77-47-4	Hexachlorocyclopentadiene	ug/kg	780	UJ		5
LWG0108R032TSSBWBC00	77-47-4	Hexachlorocyclopentadiene	ug/kg	800	UJ		5
LWG0106R031TSCRWBC00	78-59-1	Isophorone	ug/kg	1600	UJ		13
LWG0103R001TSSPWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0103R002TSSPWBC10	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0103R002TSSPWBC20	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0103R003TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0103R004TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0103R005TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0103R014TSLSWBC10	62-75-9	N-Nitrosodimethylamine	ug/kg	130	UJ		5
LWG0103R014TSLSWBC20	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0103R014TSSBWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	150	UJ		5
LWG0103R032TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0104R002TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0104R003TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0104R004TSCRWBC10	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0104R004TSCRWBC20	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0104R023TSSBWBC20	62-75-9	N-Nitrosodimethylamine	ug/kg	150	UJ		5
LWG0105R001TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0105R001TSSPWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0105R003TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0105R006TSLSWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0105R006TSSBWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	150	UJ		5
LWG0106R001TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0106R002TSCAWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0106R002TSSPWBC10	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0106R004TSCRWBC10	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0106R004TSCRWBC20	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0106R024TSSBWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0106R031TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0107R009TSLSWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	130	UJ		5
LWG0107R009TSSBWBC10	62-75-9	N-Nitrosodimethylamine	ug/kg	140	UJ		5
LWG0107R009TSSBWBC20	62-75-9	N-Nitrosodimethylamine	ug/kg	130	UJ		5
LWG0107R009TSSBWBC30	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0108R002TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5

Table E-21. Qualified Data for Semivolatile Organic Compounds in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0108R003TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0108R010TSLSWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	150	UJ		5
LWG0108R010TSSBWBC10	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0108R010TSSBWBC20	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0108R010TSSBWBC30	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0108R032TSSBWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0109R001TSCRWBC10	62-75-9	N-Nitrosodimethylamine	ug/kg	170	UJ		5
LWG0109R001TSCRWBC20	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0109R002TSCRWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0109R002TSSPWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	150	UJ		5
LWG0109R006TSLSWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	130	UJ		5,13
LWG0109R006TSSBWBC00	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG01FZ0306TSCPWBC10	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG01FZ0306TSCPWBC20	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG01FZ0306TSCPWBC30	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG01FZ0609TSCPWBC10	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG01FZ0609TSCPWBC20	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG01FZ0609TSCPWBC30	62-75-9	N-Nitrosodimethylamine	ug/kg	160	UJ		5
LWG0104R004TSSPWBC00	86-30-6	N-Nitrosodiphenylamine	ug/kg	170	UJ		5
LWG0107R006TSSPWBC00	86-30-6	N-Nitrosodiphenylamine	ug/kg	150	UJ		5
LWG0108R001TSSPWBC00	86-30-6	N-Nitrosodiphenylamine	ug/kg	140	UJ		5
LWG0108R003TSSPWBC00	86-30-6	N-Nitrosodiphenylamine	ug/kg	170	UJ		5
LWG0103R014TSSBWBC00	621-64-7	N-Nitrosodipropylamine	ug/kg	31	UJ		10
LWG0104R023TSSBWBC10	621-64-7	N-Nitrosodipropylamine	ug/kg	31	UJ		10
LWG0104R023TSSBWBC20	621-64-7	N-Nitrosodipropylamine	ug/kg	30	UJ		10
LWG0104R023TSSBWBC30	621-64-7	N-Nitrosodipropylamine	ug/kg	30	UJ		10
LWG0105R006TSSBWBC00	621-64-7	N-Nitrosodipropylamine	ug/kg	31	UJ		10
LWG0106R024TSSBWBC00	621-64-7	N-Nitrosodipropylamine	ug/kg	32	UJ		10
LWG0107R009TSSBWBC10	621-64-7	N-Nitrosodipropylamine	ug/kg	29	UJ		10
LWG0107R009TSSBWBC20	621-64-7	N-Nitrosodipropylamine	ug/kg	25	UJ		10
LWG0107R009TSSBWBC30	621-64-7	N-Nitrosodipropylamine	ug/kg	33	UJ		10
LWG0108R010TSSBWBC10	621-64-7	N-Nitrosodipropylamine	ug/kg	33	UJ		10
LWG0108R010TSSBWBC20	621-64-7	N-Nitrosodipropylamine	ug/kg	32	UJ		10
LWG0108R010TSSBWBC30	621-64-7	N-Nitrosodipropylamine	ug/kg	31	UJ		10
LWG0108R032TSSBWBC00	621-64-7	N-Nitrosodipropylamine	ug/kg	32	UJ		10
LWG0109R006TSSBWBC00	621-64-7	N-Nitrosodipropylamine	ug/kg	32	UJ		10
LWG01FZ0306TSCPWBC10	621-64-7	N-Nitrosodipropylamine	ug/kg	32	UJ		10
LWG01FZ0306TSCPWBC20	621-64-7	N-Nitrosodipropylamine	ug/kg	33	UJ		10
LWG01FZ0306TSCPWBC30	621-64-7	N-Nitrosodipropylamine	ug/kg	32	UJ		10
LWG01FZ0609TSCPWBC10	621-64-7	N-Nitrosodipropylamine	ug/kg	31	UJ		10
LWG01FZ0609TSCPWBC20	621-64-7	N-Nitrosodipropylamine	ug/kg	32	UJ		10
LWG01FZ0609TSCPWBC30	621-64-7	N-Nitrosodipropylamine	ug/kg	33	UJ		10

Notes:
[a] Rejected data are not included in this summary.
[b] Qualifiers, laboratory flags, and data qualifier reason codes are defined in Table X-1
[c] Laboratory flags are only included when they describe quality control exceedances that resulted in qualification of data

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0102R001TSCRWBC00	53-19-0	2,4'-DDD	ug/kg	1	U	JP	I-23
LWG0102R015TSCRWBC00	53-19-0	2,4'-DDD	ug/kg	1	U	J	I-23
LWG0103R001TSCRWBC00	53-19-0	2,4'-DDD	ug/kg	1	U	J	I-23
LWG0103R004TSCRWBC00	53-19-0	2,4'-DDD	ug/kg	1	U	JP	I-23
LWG0103R005TSCRWBC00	53-19-0	2,4'-DDD	ug/kg	1	U	JP	I-23
LWG0103R032TSCRWBC00	53-19-0	2,4'-DDD	ug/kg	1	UJ	J	I-23
LWG0105R006TSLSWBC00	53-19-0	2,4'-DDD	ug/kg	16	NJ	P	I-23
LWG0106R001TSSPWBC00	53-19-0	2,4'-DDD	ug/kg	2.1	NJ	P	I-23
LWG0106R002TSCAWBC00	53-19-0	2,4'-DDD	ug/kg	2.6	N		I-23
LWG0106R002TSSPWBC10	53-19-0	2,4'-DDD	ug/kg	4	U	JP	I-23
LWG0106R004TSSPWBC00	53-19-0	2,4'-DDD	ug/kg	40	J		I-23
LWG0106R024TSSBFLC00	53-19-0	2,4'-DDD	ug/kg	1.4	NJ	P	I-23
LWG0107R003TSCAWBC00	53-19-0	2,4'-DDD	ug/kg	14	J		I-23
LWG0107R003TSCRWBC00	53-19-0	2,4'-DDD	ug/kg	2	UJ	J	I-23
LWG0107R006TSCRWBC00	53-19-0	2,4'-DDD	ug/kg	4.3	NJ	P	I-23
LWG0108R003TSCRWBC00	53-19-0	2,4'-DDD	ug/kg	1	U	J	I-23
LWG0109R001TSSPWBC00	53-19-0	2,4'-DDD	ug/kg	4	UJ	P	I-23
LWG01FZ0306TSBBFLC10	53-19-0	2,4'-DDD	ug/kg	1.1	NJ	P	I-23
LWG01FZ0306TSBCFLC10	53-19-0	2,4'-DDD	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBCFLC20	53-19-0	2,4'-DDD	ug/kg	1	U	JP	I-23
LWG01FZ0306TSCPWBC10	53-19-0	2,4'-DDD	ug/kg	19	NJ	P	I-23
LWG01FZ0306TSCPWBC20	53-19-0	2,4'-DDD	ug/kg	130	J		I-23
LWG01FZ0609TSBBFLC10	53-19-0	2,4'-DDD	ug/kg	1.4	NJ	P	I-23
LWG01FZ0609TSBBWBC30	53-19-0	2,4'-DDD	ug/kg	12	NJ	P	I-23
LWG01FZ0609TSBCFLC10	53-19-0	2,4'-DDD	ug/kg	1	U	JP	I-23
LWG01FZ0609TSBCFLC20	53-19-0	2,4'-DDD	ug/kg	1	U	JP	I-23
LWG01FZ0609TSCPFLC20	53-19-0	2,4'-DDD	ug/kg	20	J		I-23
LWG01FZ0609TSCPWBC30	53-19-0	2,4'-DDD	ug/kg	33	J		I-23
LWG0102R001TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ		10
LWG0102R015TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ	JP	I-23
LWG0103R001TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ	JP	I-23
LWG0103R001TSSPWBC00	3424-82-6	2,4'-DDE	ug/kg	1.4	UJ		5
LWG0103R002TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ	J	I-23
LWG0103R002TSSPWBC10	3424-82-6	2,4'-DDE	ug/kg	1.2	UJ		5
LWG0103R003TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ	J	I-23
LWG0103R004TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ		10
LWG0103R005TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ	JP	I-23
LWG0103R032TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ	J	I-23
LWG0103R034TSSPWBC00	3424-82-6	2,4'-DDE	ug/kg	4	UJ		5
LWG0104R002TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ	JP	I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0104R003TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	3.3	NJ	P	I-23
LWG0104R004TSCRWBC10	3424-82-6	2,4'-DDE	ug/kg	1	UJ	J	I-23
LWG0104R004TSCRWBC20	3424-82-6	2,4'-DDE	ug/kg	1	UJ	J	I-23
LWG0105R001TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ	JP	I-23
LWG0105R001TSSPWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ		5
LWG0105R003TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1.4	NJ		I-23
LWG0106R001TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ	JP	I-23
LWG0106R004TSCRWBC10	3424-82-6	2,4'-DDE	ug/kg	1	UJ	J	I-23
LWG0106R004TSCRWBC20	3424-82-6	2,4'-DDE	ug/kg	1	UJ		10
LWG0106R031TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	NJ	P	I-23
LWG0107R003TSCAWBC00	3424-82-6	2,4'-DDE	ug/kg	2.5	NJ	P	I-23
LWG0107R004TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ	J	I-23
LWG0107R006TSCAWBC00	3424-82-6	2,4'-DDE	ug/kg	12	J		I-23
LWG0108R001TSCRWBC00	3424-82-6	2,4'-DDE	ug/kg	1	U	JP	I-23
LWG0108R002TSSPWBC00	3424-82-6	2,4'-DDE	ug/kg	1	UJ		5
LWG0108R032TSSBWBC00	3424-82-6	2,4'-DDE	ug/kg	4	UJ		5
LWG0109R001TSCRWBC20	3424-82-6	2,4'-DDE	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBBFLC10	3424-82-6	2,4'-DDE	ug/kg	1	UJ		5
LWG01FZ0306TSBBWBC10	3424-82-6	2,4'-DDE	ug/kg	1	UJ		5
LWG01FZ0306TSBBWBC20	3424-82-6	2,4'-DDE	ug/kg	1.6	UJ		5
LWG01FZ0306TSBBWBC30	3424-82-6	2,4'-DDE	ug/kg	1	UJ		5
LWG01FZ0306TSCPFLC10	3424-82-6	2,4'-DDE	ug/kg	4	UJ		5
LWG01FZ0609TSBBWBC20	3424-82-6	2,4'-DDE	ug/kg	1.3	UJ		5
LWG01FZ0609TSCPWBC10	3424-82-6	2,4'-DDE	ug/kg	4	UJ		5
LWG01FZ0609TSCPWBC20	3424-82-6	2,4'-DDE	ug/kg	5	UJ		5
LWG0102R001TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	7.6	NJ	P	I-23
LWG0102R015TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	9.5	NJ	P	I-23
LWG0103R001TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	2.2	N		I-23
LWG0103R001TSSPWBC00	789-02-6	2,4'-DDT	ug/kg	8.6	NJ	P	I-23
LWG0103R002TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	2.1	NJ	P	I-23
LWG0103R002TSSPWBC10	789-02-6	2,4'-DDT	ug/kg	8.4	NJ	P	I-23
LWG0103R002TSSPWBC20	789-02-6	2,4'-DDT	ug/kg	9.7	NJ	P	I-23
LWG0103R003TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	3.5	NJ	P	I-23
LWG0103R004TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	2.9	J		I-23
LWG0103R004TSSPWBC20	789-02-6	2,4'-DDT	ug/kg	27	J		I-23
LWG0103R005TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	6.1	UJ	P	I-23
LWG0103R005TSSPWBC00	789-02-6	2,4'-DDT	ug/kg	34	NJ	P	I-23
LWG0103R014TSLSWBC20	789-02-6	2,4'-DDT	ug/kg	14	NJ	P	I-23
LWG0103R014TSPMWBC00	789-02-6	2,4'-DDT	ug/kg	5.7	J		I-23
LWG0103R014TSSBFLC00	789-02-6	2,4'-DDT	ug/kg	4.6	J		I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R032TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	2.1	NJ	P	I-23
LWG0103R032TSSPWBC00	789-02-6	2,4'-DDT	ug/kg	7.4	NJ	P	I-23
LWG0104R002TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	1.9	NJ	P	I-23
LWG0104R002TSSPWBC00	789-02-6	2,4'-DDT	ug/kg	9	NJ	P	I-23
LWG0104R003TSSPWBC00	789-02-6	2,4'-DDT	ug/kg	9.8	NJ	P	I-23
LWG0104R004TSCRWBC10	789-02-6	2,4'-DDT	ug/kg	2.1	N		I-23
LWG0104R004TSCRWBC20	789-02-6	2,4'-DDT	ug/kg	1	U	JP	I-23
LWG0104R004TSSPWBC00	789-02-6	2,4'-DDT	ug/kg	5.4	NJ	P	I-23
LWG0105R001TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	1.7	NJ	P	I-23
LWG0105R006TSLSWBC00	789-02-6	2,4'-DDT	ug/kg	9.3	NJ	P	I-23
LWG0105R006TSSBFLC00	789-02-6	2,4'-DDT	ug/kg	2.9	NJ	P	I-23
LWG0106R001TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	1.2	N	P	I-23
LWG0106R001TSSPWBC00	789-02-6	2,4'-DDT	ug/kg	7.7	NJ	P	I-23
LWG0106R004TSCRWBC10	789-02-6	2,4'-DDT	ug/kg	1.6	N		I-23
LWG0106R004TSCRWBC20	789-02-6	2,4'-DDT	ug/kg	1.1	NJ	P	I-23
LWG0106R024TSSBFLC00	789-02-6	2,4'-DDT	ug/kg	2	NJ	P	I-23
LWG0106R031TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	1.4	NJ	P	I-23
LWG0107R003TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	3.5	NJ	P	I-23
LWG0107R004TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	1.5	NJ	P	I-23
LWG0107R006TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	2.6	N		I-23
LWG0108R001TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	6.6	NJ	P	I-23
LWG0108R002TSCRWBC00	789-02-6	2,4'-DDT	ug/kg	2.9	NJ	P	I-23
LWG0108R002TSSPWBC00	789-02-6	2,4'-DDT	ug/kg	10	NJ	P	I-23
LWG0108R032TSSBFLC00	789-02-6	2,4'-DDT	ug/kg	5.2	NJ	P	I-23
LWG0109R002TSSPWBC00	789-02-6	2,4'-DDT	ug/kg	81	NJ	P	I-23
LWG0109R006TSSBFLC00	789-02-6	2,4'-DDT	ug/kg	3.1	NJ	P	I-23
LWG01FZ0306TSBBFLC10	789-02-6	2,4'-DDT	ug/kg	2.6	N		I-23
LWG01FZ0306TSBBFLC20	789-02-6	2,4'-DDT	ug/kg	1.7	N		I-23
LWG01FZ0306TSBBFLC30	789-02-6	2,4'-DDT	ug/kg	2.5	J		I-23
LWG01FZ0306TSBBWBC10	789-02-6	2,4'-DDT	ug/kg	3.3	N		I-23
LWG01FZ0306TSBBWBC20	789-02-6	2,4'-DDT	ug/kg	8.1	NJ	P	I-23
LWG01FZ0306TSBBWBC30	789-02-6	2,4'-DDT	ug/kg	14	N		I-23
LWG01FZ0306TSBCFLC10	789-02-6	2,4'-DDT	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBCFLC20	789-02-6	2,4'-DDT	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBCWBC10	789-02-6	2,4'-DDT	ug/kg	4.7	NJ	P	I-23
LWG01FZ0306TSBCWBC20	789-02-6	2,4'-DDT	ug/kg	5	NJ	P	I-23
LWG01FZ0306TSCPFLC20	789-02-6	2,4'-DDT	ug/kg	24	N		I-23
LWG01FZ0306TSCPWBC10	789-02-6	2,4'-DDT	ug/kg	23	NJ	P	I-23
LWG01FZ0609TSBBFLC10	789-02-6	2,4'-DDT	ug/kg	3.1	NJ	P	I-23
LWG01FZ0609TSBBWBC20	789-02-6	2,4'-DDT	ug/kg	8.1	NJ	P	I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0609TSBBWBC30	789-02-6	2,4'-DDT	ug/kg	12	NJ	P	I-23
LWG01FZ0609TSBCFLC10	789-02-6	2,4'-DDT	ug/kg	1.1	NJ	P	I-23
LWG01FZ0609TSBCFLC20	789-02-6	2,4'-DDT	ug/kg	1.1	NJ	P	I-23
LWG01FZ0609TSBCWBC10	789-02-6	2,4'-DDT	ug/kg	6.6	NJ	P	I-23
LWG0102R015TSCRWBC00	72-54-8	4,4'-DDD	ug/kg	1	U	JP	I-23
LWG0103R001TSCRWBC00	72-54-8	4,4'-DDD	ug/kg	1	U	JP	I-23
LWG0103R001TSSPWBC00	72-54-8	4,4'-DDD	ug/kg	5.2	NJ		I-23
LWG0103R002TSSPWBC10	72-54-8	4,4'-DDD	ug/kg	6.7	N		I-23
LWG0103R002TSSPWBC20	72-54-8	4,4'-DDD	ug/kg	7.2	N		I-23
LWG0103R004TSSPWBC10	72-54-8	4,4'-DDD	ug/kg	5.7	N		I-23
LWG0103R004TSSPWBC20	72-54-8	4,4'-DDD	ug/kg	8.3	N		I-23
LWG0103R005TSSPWBC00	72-54-8	4,4'-DDD	ug/kg	7.7	N		I-23
LWG0103R014TSLSWBC20	72-54-8	4,4'-DDD	ug/kg	31	J		I-23
LWG0103R014TSSBFLC00	72-54-8	4,4'-DDD	ug/kg	4.1	J		I-23
LWG0103R014TSSBWBC00	72-54-8	4,4'-DDD	ug/kg	29	J		I-23
LWG0103R032TSCRWBC00	72-54-8	4,4'-DDD	ug/kg	1	U	JP	I-23
LWG0103R032TSSPWBC00	72-54-8	4,4'-DDD	ug/kg	7.3	N		I-23
LWG0104R002TSSPWBC00	72-54-8	4,4'-DDD	ug/kg	5.6	J		I-23
LWG0104R003TSCRWBC00	72-54-8	4,4'-DDD	ug/kg	1.2	NJ	P	I-23
LWG0104R003TSSPWBC00	72-54-8	4,4'-DDD	ug/kg	5.3	N		I-23
LWG0104R004TSSPWBC00	72-54-8	4,4'-DDD	ug/kg	12	J		I-23
LWG0104R023TSSBWBC20	72-54-8	4,4'-DDD	ug/kg	25	J		I-23
LWG0104R023TSSBWBC30	72-54-8	4,4'-DDD	ug/kg	23	J		10
LWG0105R006TSSBFLC00	72-54-8	4,4'-DDD	ug/kg	4.2	J		I-23
LWG0105R006TSSBWBC00	72-54-8	4,4'-DDD	ug/kg	30	J		10
LWG0105R020TSSPWBC00	72-54-8	4,4'-DDD	ug/kg	11	J		I-23
LWG0106R001TSCRWBC00	72-54-8	4,4'-DDD	ug/kg	1	U	J	I-23
LWG0106R001TSSPWBC00	72-54-8	4,4'-DDD	ug/kg	16	J		13
LWG0106R002TSCAWBC00	72-54-8	4,4'-DDD	ug/kg	2.2	N		I-23
LWG0106R004TSCRWBC10	72-54-8	4,4'-DDD	ug/kg	2.9	J		I-23
LWG0106R004TSCRWBC20	72-54-8	4,4'-DDD	ug/kg	9.6	NJ	P	I-23
LWG0106R004TSSPWBC00	72-54-8	4,4'-DDD	ug/kg	150	J		13
LWG0106R024TSSBWBC00	72-54-8	4,4'-DDD	ug/kg	17	J		10
LWG0107R003TSCRWBC00	72-54-8	4,4'-DDD	ug/kg	3.1	J		10,13
LWG0107R006TSCRWBC00	72-54-8	4,4'-DDD	ug/kg	17	NJ	P	I-23
LWG0108R001TSCRWBC00	72-54-8	4,4'-DDD	ug/kg	1	UJ	J	I-23
LWG0108R002TSCRWBC00	72-54-8	4,4'-DDD	ug/kg	1	UJ		10
LWG0108R002TSSPWBC00	72-54-8	4,4'-DDD	ug/kg	4.6	NJ		I-23
LWG0108R003TSCRWBC00	72-54-8	4,4'-DDD	ug/kg	1	UJ		10
LWG0108R010TSNPWBC00	72-54-8	4,4'-DDD	ug/kg	17	NJ	P	I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0108R032TSSBFLC00	72-54-8	4,4'-DDD	ug/kg	2.7	J		I-23
LWG0109R001TSCRWBC10	72-54-8	4,4'-DDD	ug/kg	1	UJ		10
LWG0109R001TSCRWBC20	72-54-8	4,4'-DDD	ug/kg	1	UJ		10
LWG0109R001TSSPWBC00	72-54-8	4,4'-DDD	ug/kg	4	U	J	I-23
LWG0109R002TSCRWBC00	72-54-8	4,4'-DDD	ug/kg	1	UJ		10
LWG0109R002TSSPWBC00	72-54-8	4,4'-DDD	ug/kg	9.6	U	J	I-23
LWG0109R006TSLSWBC00	72-54-8	4,4'-DDD	ug/kg	28	J		I-23
LWG0109R006TSSBFLC00	72-54-8	4,4'-DDD	ug/kg	1.9	N		I-23
LWG01FZ0306TSBBFLC10	72-54-8	4,4'-DDD	ug/kg	2.1	J		I-23
LWG01FZ0306TSBBFLC20	72-54-8	4,4'-DDD	ug/kg	2.7	J		I-23
LWG01FZ0306TSBBFLC30	72-54-8	4,4'-DDD	ug/kg	3.8	J		I-23
LWG01FZ0306TSBBWBC10	72-54-8	4,4'-DDD	ug/kg	6.9	J		I-23
LWG01FZ0306TSBBWBC20	72-54-8	4,4'-DDD	ug/kg	9	NJ	P	I-23
LWG01FZ0306TSBBWBC30	72-54-8	4,4'-DDD	ug/kg	7.4	J		I-23
LWG01FZ0306TSBCFLC10	72-54-8	4,4'-DDD	ug/kg	1.8	J		I-23
LWG01FZ0306TSBCFLC20	72-54-8	4,4'-DDD	ug/kg	2.4	J		I-23
LWG01FZ0306TSBCWBC10	72-54-8	4,4'-DDD	ug/kg	7.9	J		I-23
LWG01FZ0306TSBCWBC20	72-54-8	4,4'-DDD	ug/kg	11	J		13
LWG01FZ0306TSCPFLC10	72-54-8	4,4'-DDD	ug/kg	33	J		10
LWG01FZ0306TSCPFLC20	72-54-8	4,4'-DDD	ug/kg	23	NJ		I-23
LWG01FZ0306TSCPFLC30	72-54-8	4,4'-DDD	ug/kg	42	J		13
LWG01FZ0306TSCPWBC10	72-54-8	4,4'-DDD	ug/kg	27	J		10
LWG01FZ0306TSCPWBC20	72-54-8	4,4'-DDD	ug/kg	87	J		I-23
LWG01FZ0306TSCPWBC30	72-54-8	4,4'-DDD	ug/kg	33	J		10
LWG01FZ0609TSBBFLC10	72-54-8	4,4'-DDD	ug/kg	1.4	N		I-23
LWG01FZ0609TSBCFLC10	72-54-8	4,4'-DDD	ug/kg	2.7	J		I-23
LWG01FZ0609TSBCFLC20	72-54-8	4,4'-DDD	ug/kg	2	N		I-23
LWG01FZ0609TSBCWBC10	72-54-8	4,4'-DDD	ug/kg	11	J		I-23
LWG01FZ0609TSBCWBC20	72-54-8	4,4'-DDD	ug/kg	16	J		I-23
LWG01FZ0609TSCPFLC10	72-54-8	4,4'-DDD	ug/kg	26	J		10
LWG01FZ0609TSCPFLC30	72-54-8	4,4'-DDD	ug/kg	42	J		I-23
LWG01FZ0609TSCPWBC10	72-54-8	4,4'-DDD	ug/kg	39	J		I-23
LWG01FZ0609TSCPWBC20	72-54-8	4,4'-DDD	ug/kg	55	J		I-23
LWG01FZ0609TSCPWBC30	72-54-8	4,4'-DDD	ug/kg	38	J		I-23
LWG0102R001TSCRWBC00	72-55-9	4,4'-DDE	ug/kg	2.9	N		I-23
LWG0103R003TSCRWBC00	72-55-9	4,4'-DDE	ug/kg	3.5	N		I-23
LWG0103R004TSCRWBC00	72-55-9	4,4'-DDE	ug/kg	3.7	N		I-23
LWG0103R004TSSPWBC10	72-55-9	4,4'-DDE	ug/kg	20	UJ	P	I-23
LWG0103R004TSSPWBC20	72-55-9	4,4'-DDE	ug/kg	22	NJ	P	I-23
LWG0103R005TSCRWBC00	72-55-9	4,4'-DDE	ug/kg	3.5	J		I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R005TSSPWBC00	72-55-9	4,4'-DDE	ug/kg	25	NJ	P	I-23
LWG0103R032TSSPWBC00	72-55-9	4,4'-DDE	ug/kg	18	NJ	P	I-23
LWG0104R002TSSPWBC00	72-55-9	4,4'-DDE	ug/kg	16	NJ	P	I-23
LWG0104R003TSSPWBC00	72-55-9	4,4'-DDE	ug/kg	14	NJ	P	I-23
LWG0104R004TSSPWBC00	72-55-9	4,4'-DDE	ug/kg	32	NJ	P	I-23
LWG0104R023TSSBWBC30	72-55-9	4,4'-DDE	ug/kg	110	J		10
LWG0105R006TSSBWBC00	72-55-9	4,4'-DDE	ug/kg	120	J		10
LWG0106R001TSSPWBC00	72-55-9	4,4'-DDE	ug/kg	29	NJ	P	I-23
LWG0106R002TSCAWBC00	72-55-9	4,4'-DDE	ug/kg	7.5	N		I-23
LWG0106R004TSSPWBC00	72-55-9	4,4'-DDE	ug/kg	330	J	P	I-23
LWG0106R024TSSBWBC00	72-55-9	4,4'-DDE	ug/kg	110	J		10
LWG0107R003TSCRWBC00	72-55-9	4,4'-DDE	ug/kg	15	J		10,13
LWG0107R009TSLSWBC00	72-55-9	4,4'-DDE	ug/kg	92	J		I-23
LWG0108R001TSCRWBC00	72-55-9	4,4'-DDE	ug/kg	6.3	J		10
LWG0108R002TSCRWBC00	72-55-9	4,4'-DDE	ug/kg	3	J		10
LWG0108R003TSCRWBC00	72-55-9	4,4'-DDE	ug/kg	3.4	NJ		I-23
LWG0108R010TSSBWBC10	72-55-9	4,4'-DDE	ug/kg	130	J	P	I-23
LWG0108R010TSSBWBC20	72-55-9	4,4'-DDE	ug/kg	66	J	P	I-23
LWG0108R010TSSBWBC30	72-55-9	4,4'-DDE	ug/kg	96	J	P	I-23
LWG0108R032TSSBWBC00	72-55-9	4,4'-DDE	ug/kg	160	J	P	I-23
LWG0109R001TSCRWBC10	72-55-9	4,4'-DDE	ug/kg	1.6	J		10,13
LWG0109R001TSCRWBC20	72-55-9	4,4'-DDE	ug/kg	1.9	NJ		I-23
LWG0109R002TSCRWBC00	72-55-9	4,4'-DDE	ug/kg	2.5	J		10
LWG01FZ0306TSBBFLC20	72-55-9	4,4'-DDE	ug/kg	9.9	J		5
LWG01FZ0306TSBBFLC30	72-55-9	4,4'-DDE	ug/kg	15	J		5
LWG01FZ0306TSBBWBC30	72-55-9	4,4'-DDE	ug/kg	42	J	P	I-23
LWG01FZ0306TSBCWBC20	72-55-9	4,4'-DDE	ug/kg	37	J		13
LWG01FZ0306TSCPFLC10	72-55-9	4,4'-DDE	ug/kg	110	J		10
LWG01FZ0306TSCPFLC20	72-55-9	4,4'-DDE	ug/kg	87	J		10
LWG01FZ0306TSCPFLC30	72-55-9	4,4'-DDE	ug/kg	160	J	E	13,20
LWG01FZ0306TSCPWBC10	72-55-9	4,4'-DDE	ug/kg	81	J		10
LWG01FZ0306TSCPWBC20	72-55-9	4,4'-DDE	ug/kg	300	J		I-23
LWG01FZ0306TSCPWBC30	72-55-9	4,4'-DDE	ug/kg	130	J		10
LWG01FZ0609TSBBFLC10	72-55-9	4,4'-DDE	ug/kg	6.6	J		I-23
LWG01FZ0609TSBBWBC10	72-55-9	4,4'-DDE	ug/kg	26	J		I-23
LWG01FZ0609TSBBWBC20	72-55-9	4,4'-DDE	ug/kg	53	NJ	P	I-23
LWG01FZ0609TSCPFLC10	72-55-9	4,4'-DDE	ug/kg	79	J		10
LWG01FZ0609TSCPWBC30	72-55-9	4,4'-DDE	ug/kg	87	J		I-23
LWG0103R001TSSPWBC00	50-29-3	4,4'-DDT	ug/kg	16	J		13
LWG0103R002TSCRWBC00	50-29-3	4,4'-DDT	ug/kg	1	U	JP	I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R003TSCRWBC00	50-29-3	4,4'-DDT	ug/kg	3.4	NJ	P	I-23
LWG0103R004TSCRWBC00	50-29-3	4,4'-DDT	ug/kg	2.3	NJ	P	I-23
LWG0103R014TSLSWBC20	50-29-3	4,4'-DDT	ug/kg	32	J		I-23
LWG0103R014TSPMWBC00	50-29-3	4,4'-DDT	ug/kg	6.5	J		I-23
LWG0103R032TSCRWBC00	50-29-3	4,4'-DDT	ug/kg	1.5	N		I-23
LWG0103R032TSSPWBC00	50-29-3	4,4'-DDT	ug/kg	23	J		I-23
LWG0104R002TSSPWBC00	50-29-3	4,4'-DDT	ug/kg	26	J		I-23
LWG0104R003TSSPWBC00	50-29-3	4,4'-DDT	ug/kg	21	J		I-23
LWG0104R004TSCRWBC10	50-29-3	4,4'-DDT	ug/kg	1	U	JP	I-23
LWG0104R004TSCRWBC20	50-29-3	4,4'-DDT	ug/kg	1	U	J	I-23
LWG0104R004TSSPWBC00	50-29-3	4,4'-DDT	ug/kg	26	J		I-23
LWG0105R001TSCRWBC00	50-29-3	4,4'-DDT	ug/kg	1	U	JP	I-23
LWG0105R020TSSPWBC00	50-29-3	4,4'-DDT	ug/kg	22	J		I-23
LWG0106R001TSSPWBC00	50-29-3	4,4'-DDT	ug/kg	27	J		13
LWG0106R004TSCRWBC10	50-29-3	4,4'-DDT	ug/kg	1.5	N		I-23
LWG0106R004TSCRWBC20	50-29-3	4,4'-DDT	ug/kg	1	U	J	I-23
LWG0106R004TSSPWBC00	50-29-3	4,4'-DDT	ug/kg	150	J		13
LWG0106R031TSCRWBC00	50-29-3	4,4'-DDT	ug/kg	1.6	NJ	P	I-23
LWG0107R003TSCRWBC00	50-29-3	4,4'-DDT	ug/kg	14	J		10,13
LWG0108R001TSCRWBC00	50-29-3	4,4'-DDT	ug/kg	4.1	UJ		10
LWG0108R002TSCRWBC00	50-29-3	4,4'-DDT	ug/kg	1	UJ	JP	I-23
LWG0108R002TSSPWBC00	50-29-3	4,4'-DDT	ug/kg	21	J		13
LWG0108R003TSCRWBC00	50-29-3	4,4'-DDT	ug/kg	2.4	UJ		10
LWG0108R010TSNPWBC00	50-29-3	4,4'-DDT	ug/kg	53	J		I-23
LWG0109R001TSCRWBC10	50-29-3	4,4'-DDT	ug/kg	2.9	UJ		10
LWG0109R001TSCRWBC20	50-29-3	4,4'-DDT	ug/kg	2.9	UJ		10
LWG0109R002TSCRWBC00	50-29-3	4,4'-DDT	ug/kg	4.7	UJ		10
LWG0109R006TSSBFLC00	50-29-3	4,4'-DDT	ug/kg	6.2	J		I-23
LWG01FZ0306TSBBFLC10	50-29-3	4,4'-DDT	ug/kg	5.1	J		I-23
LWG01FZ0306TSBBFLC20	50-29-3	4,4'-DDT	ug/kg	3.9	J		I-23
LWG01FZ0306TSBBFLC30	50-29-3	4,4'-DDT	ug/kg	4.6	J		I-23
LWG01FZ0306TSBBWBC10	50-29-3	4,4'-DDT	ug/kg	5.3	J		I-23
LWG01FZ0306TSBBWBC20	50-29-3	4,4'-DDT	ug/kg	15	N		I-23
LWG01FZ0306TSBCFLC10	50-29-3	4,4'-DDT	ug/kg	1.5	J		I-23
LWG01FZ0306TSBCFLC20	50-29-3	4,4'-DDT	ug/kg	1.5	J		I-23
LWG01FZ0306TSBCWBC10	50-29-3	4,4'-DDT	ug/kg	8.6	J		I-23
LWG01FZ0306TSBCWBC20	50-29-3	4,4'-DDT	ug/kg	10	J		13
LWG01FZ0306TSCPFLC20	50-29-3	4,4'-DDT	ug/kg	39	NJ		I-23
LWG01FZ0306TSCPWBC10	50-29-3	4,4'-DDT	ug/kg	24	J		10
LWG01FZ0609TSBBFLC10	50-29-3	4,4'-DDT	ug/kg	8.4	J		I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0609TSBCFLC10	50-29-3	4,4'-DDT	ug/kg	2.1	J		I-23
LWG01FZ0609TSBCFLC20	50-29-3	4,4'-DDT	ug/kg	2.3	NJ		I-23
LWG01FZ0609TSBCWBC10	50-29-3	4,4'-DDT	ug/kg	15	J		I-23
LWG0103R003TSCRWBC00	309-00-2	Aldrin	ug/kg	1	U	J	I-23
LWG0103R014TSLSWBC10	309-00-2	Aldrin	ug/kg	4	U	J	I-23
LWG0106R004TSSPWBC00	309-00-2	Aldrin	ug/kg	4	UJ	JP	I-23
LWG0107R003TSCAWBC00	309-00-2	Aldrin	ug/kg	1.1	U	JP	I-23
LWG01FZ0306TSBCWBC10	309-00-2	Aldrin	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBCWBC20	309-00-2	Aldrin	ug/kg	1	UJ	JP	I-23
LWG01FZ0609TSBCFLC20	309-00-2	Aldrin	ug/kg	1	U	J	I-23
LWG0103R005TSCRWBC00	959-98-8	alpha-Endosulfan	ug/kg	1	U	J	I-23
LWG0103R014TSLSWBC10	959-98-8	alpha-Endosulfan	ug/kg	11	N		I-23
LWG0106R004TSCRWBC20	959-98-8	alpha-Endosulfan	ug/kg	1	U	J	I-23
LWG0107R003TSCAWBC00	959-98-8	alpha-Endosulfan	ug/kg	1	U	JP	I-23
LWG0107R006TSCAWBC00	959-98-8	alpha-Endosulfan	ug/kg	1	U	J	I-23
LWG0107R009TSLSWBC00	959-98-8	alpha-Endosulfan	ug/kg	20	U	J	I-23
LWG0107R009TSSBWBC30	959-98-8	alpha-Endosulfan	ug/kg	4	UJ	JP	I-23
LWG0108R001TSSPWBC00	959-98-8	alpha-Endosulfan	ug/kg	4	UJ	JP	I-23
LWG0108R010TSLSWBC00	959-98-8	alpha-Endosulfan	ug/kg	4	U	JP	I-23
LWG0108R010TSSBWBC20	959-98-8	alpha-Endosulfan	ug/kg	20	U	JP	I-23
LWG0108R010TSSBWBC30	959-98-8	alpha-Endosulfan	ug/kg	10	U	JP	I-23
LWG0109R002TSSPWBC00	959-98-8	alpha-Endosulfan	ug/kg	9.6	U	JP	I-23
LWG0109R006TSLSWBC00	959-98-8	alpha-Endosulfan	ug/kg	4	U	JP	I-23
LWG01FZ0306TSBBFLC20	959-98-8	alpha-Endosulfan	ug/kg	1	U	JP	I-23
LWG01FZ0306TSCPFLC10	959-98-8	alpha-Endosulfan	ug/kg	4	U	JP	I-23
LWG01FZ0306TSCPFLC30	959-98-8	alpha-Endosulfan	ug/kg	4.1	NJ	P	I-23
LWG01FZ0306TSCPWBC20	959-98-8	alpha-Endosulfan	ug/kg	20	UJ	P	I-23
LWG01FZ0609TSCPWBC10	959-98-8	alpha-Endosulfan	ug/kg	4	U	JP	I-23
LWG01FZ0609TSCPWBC30	959-98-8	alpha-Endosulfan	ug/kg	3.6	NJ	JP	I-23, L
LWG0105R006TSLSWBC00	319-84-6	alpha-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0105R006TSSBWBC00	319-84-6	alpha-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0109R006TSPMWBC00	319-84-6	alpha-Hexachlorocyclohexane	ug/kg	1	U	J	I-23
LWG01FZ0609TSBCWBC10	319-84-6	alpha-Hexachlorocyclohexane	ug/kg	1.4	NJ	P	I-23
LWG0103R001TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1	N		I-23
LWG0103R002TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1.4	N		I-23
LWG0103R003TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1.1	N		I-23
LWG0103R004TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	3.1	J		I-23
LWG0103R005TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1.6	N		I-23
LWG0103R032TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1	U	J	I-23
LWG0104R002TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1	UJ	J	I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0104R003TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1.6	N		I-23
LWG0104R004TSCRWBC10	33213-65-9	beta-Endosulfan	ug/kg	1	U	J	I-23
LWG0104R023TSSBWBC30	33213-65-9	beta-Endosulfan	ug/kg	1.3	UJ		10
LWG0105R001TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1.7	NJ	P	I-23
LWG0105R003TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1.3	N		I-23
LWG0105R006TSSBWBC00	33213-65-9	beta-Endosulfan	ug/kg	1.2	UJ		10
LWG0106R001TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	2.1	J		I-23
LWG0106R001TSSPWBC00	33213-65-9	beta-Endosulfan	ug/kg	1	UJ	JP	I-23
LWG0106R004TSCRWBC10	33213-65-9	beta-Endosulfan	ug/kg	1	U	J	I-23
LWG0106R024TSSBWBC00	33213-65-9	beta-Endosulfan	ug/kg	1	UJ		10
LWG0106R031TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1.3	N		I-23
LWG0107R003TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	2	UJ		10
LWG0107R004TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	2.2	J		I-23
LWG0107R009TSSBWBC30	33213-65-9	beta-Endosulfan	ug/kg	4	U	J	I-23
LWG0108R001TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1	UJ	J	I-23
LWG0108R002TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1	UJ		10
LWG0108R003TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1.8	UJ		10
LWG0109R001TSCRWBC10	33213-65-9	beta-Endosulfan	ug/kg	1	UJ		10
LWG0109R001TSCRWBC20	33213-65-9	beta-Endosulfan	ug/kg	1.1	UJ		10
LWG0109R002TSCRWBC00	33213-65-9	beta-Endosulfan	ug/kg	1	UJ		10
LWG01FZ0306TSBBWBC10	33213-65-9	beta-Endosulfan	ug/kg	2.3	NJ	P	I-23
LWG01FZ0306TSBBWBC20	33213-65-9	beta-Endosulfan	ug/kg	8.6	NJ	P	I-23
LWG01FZ0306TSCPFLC10	33213-65-9	beta-Endosulfan	ug/kg	4	UJ		10
LWG01FZ0306TSCPFLC20	33213-65-9	beta-Endosulfan	ug/kg	4	UJ		10
LWG01FZ0306TSCPWBC10	33213-65-9	beta-Endosulfan	ug/kg	1	UJ		10
LWG01FZ0306TSCPWBC30	33213-65-9	beta-Endosulfan	ug/kg	9.7	UJ		10
LWG0103R001TSSPWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	4.3	NJ		I-23
LWG0103R002TSSPWBC10	319-85-7	beta-Hexachlorocyclohexane	ug/kg	4.1	NJ		I-23
LWG0103R002TSSPWBC20	319-85-7	beta-Hexachlorocyclohexane	ug/kg	6.2	NJ	P	I-23
LWG0103R004TSSPWBC10	319-85-7	beta-Hexachlorocyclohexane	ug/kg	4.5	NJ		I-23
LWG0103R004TSSPWBC20	319-85-7	beta-Hexachlorocyclohexane	ug/kg	2.9	NJ		I-23
LWG0103R005TSSPWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ		I-23
LWG0103R014TSPMWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	4.1	U	P	I-23
LWG0103R014TSSBFLC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	4.5	N		I-23
LWG0103R032TSSPWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	4.1	NJ	P	I-23
LWG0104R002TSSPWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	3.8	NJ	P	I-23
LWG0104R003TSSPWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	2.5	NJ		I-23
LWG0104R004TSSPWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	3.4	NJ		I-23
LWG0104R023TSSBWBC10	319-85-7	beta-Hexachlorocyclohexane	ug/kg	4	UJ	J	I-23
LWG0104R023TSSBWBC30	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1.2	UJ		10

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0105R006TSLSWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	3.3	UJ		5
LWG0105R006TSSBWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1.4	UJ		10
LWG0105R020TSSPWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	3.9	NJ		I-23
LWG0106R001TSSPWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	5.3	NJ		I-23
LWG0106R002TSCAWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1.2	NJ		I-23
LWG0107R003TSCAWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ		5
LWG0107R003TSCRWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	2	UJ	JP	I-23
LWG0107R006TSCRWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ		5
LWG0107R006TSSPWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ		10
LWG0108R001TSCRWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ		10
LWG0108R002TSCRWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ		10
LWG0108R002TSSPWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	2	NJ		I-23
LWG0108R003TSCRWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ		10
LWG0109R001TSCRWBC10	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ		10
LWG0109R001TSCRWBC20	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ		10
LWG0109R002TSCRWBC00	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ	J	I-23
LWG01FZ0306TSBBFLC10	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ		5
LWG01FZ0306TSBBWBC10	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ		10
LWG01FZ0306TSBBWBC20	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1.9	UJ		10
LWG01FZ0306TSBBWBC30	319-85-7	beta-Hexachlorocyclohexane	ug/kg	2.3	UJ		10
LWG01FZ0306TSBCWBC10	319-85-7	beta-Hexachlorocyclohexane	ug/kg	2.3	UJ		5
LWG01FZ0306TSBCWBC20	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1.5	UJ		5
LWG01FZ0306TSCPFLC10	319-85-7	beta-Hexachlorocyclohexane	ug/kg	4	UJ		10
LWG01FZ0306TSCPFLC20	319-85-7	beta-Hexachlorocyclohexane	ug/kg	4	UJ		10
LWG01FZ0306TSCPWBC10	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1.5	UJ		10
LWG01FZ0306TSCPWBC30	319-85-7	beta-Hexachlorocyclohexane	ug/kg	3	UJ		10
LWG01FZ0609TSBBFLC10	319-85-7	beta-Hexachlorocyclohexane	ug/kg	1	UJ		5
LWG01FZ0609TSBBWBC20	319-85-7	beta-Hexachlorocyclohexane	ug/kg	2.3	UJ		10
LWG0103R001TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	4.4	NJ	P	I-23
LWG0103R002TSSPWBC10	5103-71-9	cis-Chlordane	ug/kg	5	NJ	P	I-23
LWG0103R002TSSPWBC20	5103-71-9	cis-Chlordane	ug/kg	4.1	NJ	P	I-23
LWG0103R014TSLSWBC20	5103-71-9	cis-Chlordane	ug/kg	4	U	J	I-23
LWG0103R014TSNPWBC10	5103-71-9	cis-Chlordane	ug/kg	9.9	U	JP	I-23
LWG0103R014TSNPWBC20	5103-71-9	cis-Chlordane	ug/kg	6.4	U	P	I-23
LWG0103R014TSPMWBC00	5103-71-9	cis-Chlordane	ug/kg	2.4	U	P	I-23
LWG0103R032TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	4	NJ	P	I-23
LWG0103R034TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	4	U	JP	I-23
LWG0104R002TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	3.4	N		I-23
LWG0104R003TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	3.7	NJ	P	I-23
LWG0104R004TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	3.7	NJ	P	I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0104R023TSSBWBC10	5103-71-9	cis-Chlordane	ug/kg	4	UJ	JP	I-23
LWG0104R023TSSBWBC20	5103-71-9	cis-Chlordane	ug/kg	4	U	JP	I-23
LWG0104R023TSSBWBC30	5103-71-9	cis-Chlordane	ug/kg	2.8	UJ		10
LWG0105R001TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	2.8	NJ	P	I-23
LWG0105R006TSNPWBC00	5103-71-9	cis-Chlordane	ug/kg	10	U	P	I-23
LWG0105R006TSPMWBC00	5103-71-9	cis-Chlordane	ug/kg	3.4	N		I-23
LWG0105R006TSSBWBC00	5103-71-9	cis-Chlordane	ug/kg	2.8	UJ		10
LWG0105R020TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	4	NJ	P	I-23
LWG0106R001TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	3.9	NJ	P	I-23
LWG0106R002TSSPWBC10	5103-71-9	cis-Chlordane	ug/kg	4	U	JP	I-23
LWG0106R004TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	4	UJ	P	I-23
LWG0106R024TSSBFLC00	5103-71-9	cis-Chlordane	ug/kg	1	U	JP	I-23
LWG0106R024TSSBWBC00	5103-71-9	cis-Chlordane	ug/kg	1.2	UJ		10
LWG0107R003TSCAWBC00	5103-71-9	cis-Chlordane	ug/kg	1	U	J	I-23
LWG0107R003TSCRWBC00	5103-71-9	cis-Chlordane	ug/kg	2	UJ		10
LWG0107R003TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	2.5	NJ	P	I-23
LWG0107R006TSCAWBC00	5103-71-9	cis-Chlordane	ug/kg	2.2	N		I-23
LWG0107R006TSCRWBC00	5103-71-9	cis-Chlordane	ug/kg	1	U	JP	I-23
LWG0107R006TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	16	NJ		I-23
LWG0107R009TSLSWBC00	5103-71-9	cis-Chlordane	ug/kg	20	U	JP	I-23
LWG0107R009TSNPWBC00	5103-71-9	cis-Chlordane	ug/kg	19	U	J	I-23
LWG0107R009TSSBWBC10	5103-71-9	cis-Chlordane	ug/kg	5.4	NJ	P	I-23
LWG0107R009TSSBWBC20	5103-71-9	cis-Chlordane	ug/kg	5.6	NJ	P	I-23
LWG0107R009TSSBWBC30	5103-71-9	cis-Chlordane	ug/kg	4	U	JP	I-23
LWG0108R001TSCRWBC00	5103-71-9	cis-Chlordane	ug/kg	1	UJ		10
LWG0108R001TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	4	UJ	J	I-23
LWG0108R002TSCRWBC00	5103-71-9	cis-Chlordane	ug/kg	1	UJ		10
LWG0108R002TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	3.6	NJ	P	I-23
LWG0108R003TSCRWBC00	5103-71-9	cis-Chlordane	ug/kg	1	UJ		10
LWG0108R003TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	4	U	JP	I-23
LWG0108R010TSPMWBC00	5103-71-9	cis-Chlordane	ug/kg	1.7	U		I-23
LWG0108R032TSSBWBC00	5103-71-9	cis-Chlordane	ug/kg	4	U	J	I-23
LWG0109R001TSCRWBC10	5103-71-9	cis-Chlordane	ug/kg	1	UJ		10
LWG0109R001TSCRWBC20	5103-71-9	cis-Chlordane	ug/kg	1	UJ		10
LWG0109R001TSSPWBC00	5103-71-9	cis-Chlordane	ug/kg	4.4	N		I-23
LWG0109R002TSCRWBC00	5103-71-9	cis-Chlordane	ug/kg	1	UJ		10
LWG0109R006TSPMWBC00	5103-71-9	cis-Chlordane	ug/kg	3.1	N		I-23
LWG01FZ0306TSBBFLC10	5103-71-9	cis-Chlordane	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBBFLC20	5103-71-9	cis-Chlordane	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBBWBC10	5103-71-9	cis-Chlordane	ug/kg	1	U	J	I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0306TSBCFLC20	5103-71-9	cis-Chlordane	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBCWBC10	5103-71-9	cis-Chlordane	ug/kg	3.4	NJ	P	I-23
LWG01FZ0306TSBCWBC20	5103-71-9	cis-Chlordane	ug/kg	3.5	NJ	P	I-23
LWG01FZ0306TSCPFLC10	5103-71-9	cis-Chlordane	ug/kg	4	UJ	J	I-23
LWG01FZ0306TSCPFLC20	5103-71-9	cis-Chlordane	ug/kg	4	UJ		10
LWG01FZ0306TSCPFLC30	5103-71-9	cis-Chlordane	ug/kg	4.3	NJ		I-23
LWG01FZ0306TSCPWBC10	5103-71-9	cis-Chlordane	ug/kg	2.8	NJ	P	I-23
LWG01FZ0306TSCPWBC30	5103-71-9	cis-Chlordane	ug/kg	3.2	NJ	P	I-23
LWG01FZ0609TSBBWBC20	5103-71-9	cis-Chlordane	ug/kg	1.7	NJ		I-23
LWG01FZ0609TSBBWBC30	5103-71-9	cis-Chlordane	ug/kg	4	U	J	I-23
LWG01FZ0609TSBCWBC10	5103-71-9	cis-Chlordane	ug/kg	1.4	N		I-23
LWG01FZ0609TSBCWBC20	5103-71-9	cis-Chlordane	ug/kg	2.1	NJ	P	I-23
LWG01FZ0609TSCPFLC10	5103-71-9	cis-Chlordane	ug/kg	20	UJ		10
LWG01FZ0609TSCPFLC20	5103-71-9	cis-Chlordane	ug/kg	4	U	J	I-23
LWG01FZ0609TSCPWBC10	5103-71-9	cis-Chlordane	ug/kg	4	U	J	I-23
LWG01FZ0609TSCPWBC20	5103-71-9	cis-Chlordane	ug/kg	8.3	N		I-23
LWG0102R001TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0102R015TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0103R001TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0103R001TSSPWBC00	5103-73-1	cis-Nonachlor	ug/kg	3.6	UJ		5
LWG0103R002TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0103R002TSSPWBC10	5103-73-1	cis-Nonachlor	ug/kg	4.9	UJ		5
LWG0103R003TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0103R004TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0103R005TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0103R032TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0104R002TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0104R003TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0104R004TSCRWBC10	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0104R004TSCRWBC20	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0105R001TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0105R001TSSPWBC00	5103-73-1	cis-Nonachlor	ug/kg	3.6	UJ		5
LWG0105R003TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0106R001TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0106R002TSSPWBC10	5103-73-1	cis-Nonachlor	ug/kg	4	UJ		5
LWG0106R004TSCRWBC10	5103-73-1	cis-Nonachlor	ug/kg	1.4	UJ		10
LWG0106R004TSCRWBC20	5103-73-1	cis-Nonachlor	ug/kg	1.7	UJ		10
LWG0106R031TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0107R004TSCRWBC00	5103-73-1	cis-Nonachlor	ug/kg	1	UJ		10
LWG0108R002TSSPWBC00	5103-73-1	cis-Nonachlor	ug/kg	3.3	UJ		5

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0109R001TSSPWBC00	5103-73-1	cis-Nonachlor	ug/kg	4	UJ		5
LWG01FZ0306TSBBWBC10	5103-73-1	cis-Nonachlor	ug/kg	3	UJ		5
LWG01FZ0306TSBBWBC20	5103-73-1	cis-Nonachlor	ug/kg	11	UJ		5
LWG01FZ0306TSBBWBC30	5103-73-1	cis-Nonachlor	ug/kg	5.5	UJ		5
LWG01FZ0609TSBBWBC20	5103-73-1	cis-Nonachlor	ug/kg	8.7	UJ		5
LWG01FZ0609TSBBWBC30	5103-73-1	cis-Nonachlor	ug/kg	8.8	UJ		5
LWG0102R015TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	4	U	JP	I-23
LWG0103R001TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	UJ	J	I-23
LWG0103R002TSSPWBC10	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	NJ	P	I-23
LWG0103R002TSSPWBC20	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0103R014TSSBFLC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0103R032TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0103R034TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	4	U	J	I-23
LWG0104R002TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0104R003TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	J	I-23
LWG0104R004TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	J	I-23
LWG0104R023TSSBWBC30	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0105R003TSCRWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0105R006TSSBFLC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	J	I-23
LWG0105R020TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0106R001TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1.6	NJ	P	I-23
LWG0106R024TSSBFLC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	J	I-23
LWG0107R003TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0108R001TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	4	UJ	J	I-23
LWG0108R002TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	UJ	J	I-23
LWG0108R003TSSPWBC00	319-86-8	delta-Hexachlorocyclohexane	ug/kg	4	U	J	I-23
LWG01FZ0306TSBBFLC20	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	J	I-23
LWG01FZ0306TSBBFLC30	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	J	I-23
LWG01FZ0306TSBBWBC30	319-86-8	delta-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG01FZ0306TSCPFLC20	319-86-8	delta-Hexachlorocyclohexane	ug/kg	4	U	JP	I-23
LWG01FZ0306TSCPFLC30	319-86-8	delta-Hexachlorocyclohexane	ug/kg	4	UJ	J	I-23
LWG01FZ0609TSBCWBC10	319-86-8	delta-Hexachlorocyclohexane	ug/kg	2.3	NJ	P	I-23
LWG0102R001TSSPWBC00	60-57-1	Dieldrin	ug/kg	34	J		I-23
LWG0102R015TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG0103R001TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG0103R001TSSPWBC00	60-57-1	Dieldrin	ug/kg	4	NJ	P	I-23
LWG0103R002TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	U	J	I-23
LWG0103R002TSSPWBC10	60-57-1	Dieldrin	ug/kg	2.8	NJ	P	I-23
LWG0103R002TSSPWBC20	60-57-1	Dieldrin	ug/kg	4.6	N		I-23
LWG0103R004TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R004TSSPWBC10	60-57-1	Dieldrin	ug/kg	15	NJ	P	I-23
LWG0103R004TSSPWBC20	60-57-1	Dieldrin	ug/kg	15	NJ	P	I-23
LWG0103R005TSSPWBC00	60-57-1	Dieldrin	ug/kg	19	NJ	P	I-23
LWG0103R014TSSBFLC00	60-57-1	Dieldrin	ug/kg	3.3	NJ	P	I-23
LWG0103R032TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	U	J	I-23
LWG0103R032TSSPWBC00	60-57-1	Dieldrin	ug/kg	3.2	NJ	P	I-23
LWG0104R002TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG0104R002TSSPWBC00	60-57-1	Dieldrin	ug/kg	5.9	N		I-23
LWG0104R003TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG0104R003TSSPWBC00	60-57-1	Dieldrin	ug/kg	7.1	NJ	P	I-23
LWG0104R004TSCRWBC10	60-57-1	Dieldrin	ug/kg	1	U	J	I-23
LWG0104R004TSCRWBC20	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG0104R004TSSPWBC00	60-57-1	Dieldrin	ug/kg	2.6	NJ	P	I-23
LWG0105R003TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG0105R006TSSBFLC00	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG0105R006TSSBWBC00	60-57-1	Dieldrin	ug/kg	5.8	UJ		10
LWG0105R020TSSPWBC00	60-57-1	Dieldrin	ug/kg	2.8	N		I-23
LWG0106R001TSSPWBC00	60-57-1	Dieldrin	ug/kg	3.4	J		13
LWG0106R002TSSPWBC10	60-57-1	Dieldrin	ug/kg	4	U	J	I-23
LWG0106R004TSCRWBC10	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG0106R024TSSBFLC00	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG0106R031TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	U	J	I-23
LWG0107R003TSCRWBC00	60-57-1	Dieldrin	ug/kg	2	UJ		10
LWG0107R004TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG0108R001TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	UJ		10
LWG0108R002TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	UJ		10
LWG0108R002TSSPWBC00	60-57-1	Dieldrin	ug/kg	3.4	NJ	P	I-23
LWG0108R003TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	UJ	J	I-23
LWG0108R003TSSPWBC00	60-57-1	Dieldrin	ug/kg	4	U	JP	I-23
LWG0108R010TSSBWBC30	60-57-1	Dieldrin	ug/kg	10	U	JP	I-23
LWG0108R032TSSBFLC00	60-57-1	Dieldrin	ug/kg	1.4	NJ	P	I-23
LWG0108R032TSSBWBC00	60-57-1	Dieldrin	ug/kg	7.3	J		I-23
LWG0109R001TSCRWBC10	60-57-1	Dieldrin	ug/kg	1	UJ		10
LWG0109R001TSCRWBC20	60-57-1	Dieldrin	ug/kg	1	UJ		10
LWG0109R001TSSPWBC00	60-57-1	Dieldrin	ug/kg	4	U	J	I-23
LWG0109R002TSCRWBC00	60-57-1	Dieldrin	ug/kg	1	UJ		10
LWG0109R006TSSBFLC00	60-57-1	Dieldrin	ug/kg	1	NJ	P	I-23
LWG01FZ0306TSBBFLC10	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBBFLC30	60-57-1	Dieldrin	ug/kg	2.1	NJ	P	I-23
LWG01FZ0306TSBBWBC10	60-57-1	Dieldrin	ug/kg	1.2	NJ	P	I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0306TSBBWBC30	60-57-1	Dieldrin	ug/kg	2.6	NJ	P	I-23
LWG01FZ0306TSBCFLC10	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBCFLC20	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG01FZ0306TSCPFLC10	60-57-1	Dieldrin	ug/kg	5.3	UJ		10
LWG01FZ0306TSCPFLC20	60-57-1	Dieldrin	ug/kg	4	UJ		10
LWG01FZ0306TSCPWBC10	60-57-1	Dieldrin	ug/kg	1	UJ		10
LWG01FZ0306TSCPWBC30	60-57-1	Dieldrin	ug/kg	6.2	UJ		10
LWG01FZ0609TSBBFLC30	60-57-1	Dieldrin	ug/kg	4	U	JP	I-23
LWG01FZ0609TSBBWBC30	60-57-1	Dieldrin	ug/kg	4	U	JP	I-23
LWG01FZ0609TSBCFLC10	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG01FZ0609TSBCFLC20	60-57-1	Dieldrin	ug/kg	1	U	JP	I-23
LWG01FZ0609TSBCWBC10	60-57-1	Dieldrin	ug/kg	2.5	NJ	P	I-23
LWG0103R001TSSPWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1.3	NJ		I-23
LWG0103R002TSSPWBC10	1031-07-8	Endosulfan sulfate	ug/kg	1	U	JP	I-23
LWG0103R004TSSPWBC10	1031-07-8	Endosulfan sulfate	ug/kg	1.2	NJ	P	I-23
LWG0103R004TSSPWBC20	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ	P	I-23
LWG0103R005TSSPWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	U	JP	I-23
LWG0103R014TSPMWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	U	JP	I-23
LWG0103R032TSSPWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	U	JP	I-23
LWG0103R034TSSPWBC00	1031-07-8	Endosulfan sulfate	ug/kg	4	U	J	I-23
LWG0104R003TSSPWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	U	JP	I-23
LWG0104R023TSSBWBC30	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ	J	I-23
LWG0105R006TSPMWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	U	JP	I-23
LWG0105R006TSSBWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ	J	I-23
LWG0105R020TSSPWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	U	JP	I-23
LWG0106R002TSCAWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ		5
LWG0106R004TSCRWBC10	1031-07-8	Endosulfan sulfate	ug/kg	1	U	J	I-23
LWG0106R004TSSPWBC00	1031-07-8	Endosulfan sulfate	ug/kg	4	UJ	J	I-23
LWG0106R024TSSBWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ		10
LWG0107R003TSCAWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ		5
LWG0107R003TSCRWBC00	1031-07-8	Endosulfan sulfate	ug/kg	2	UJ		10
LWG0107R006TSCAWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ		5
LWG0107R006TSCRWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	U	J	I-23
LWG0107R009TSSBWBC30	1031-07-8	Endosulfan sulfate	ug/kg	4	U	J	I-23
LWG0108R001TSCRWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ		10
LWG0108R002TSCRWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ		10
LWG0108R002TSSPWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ	J	I-23
LWG0108R003TSCRWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ		10
LWG0108R010TSPMWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	U	J	I-23
LWG0109R001TSCRWBC10	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ		10

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0109R001TSCRWBC20	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ		10
LWG0109R002TSCRWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ		10
LWG0109R006TSPMWBC00	1031-07-8	Endosulfan sulfate	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBBWBC30	1031-07-8	Endosulfan sulfate	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBCFLC10	1031-07-8	Endosulfan sulfate	ug/kg	1	U	J	I-23
LWG01FZ0306TSBCWBC10	1031-07-8	Endosulfan sulfate	ug/kg	1.1	NJ	JP	I-23
LWG01FZ0306TSBCWBC20	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ	JP	I-23
LWG01FZ0306TSCPFLC10	1031-07-8	Endosulfan sulfate	ug/kg	4	UJ		10
LWG01FZ0306TSCPFLC20	1031-07-8	Endosulfan sulfate	ug/kg	4	UJ		10
LWG01FZ0306TSCPWBC10	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ		10
LWG01FZ0306TSCPWBC30	1031-07-8	Endosulfan sulfate	ug/kg	1	UJ	JP	I-23
LWG01FZ0609TSBCWBC10	1031-07-8	Endosulfan sulfate	ug/kg	1	U	J	I-23
LWG0102R015TSCRWBC00	72-20-8	Endrin	ug/kg	1.8	NJ	P	I-23
LWG0103R001TSCRWBC00	72-20-8	Endrin	ug/kg	1	U	J	I-23
LWG0103R002TSCRWBC00	72-20-8	Endrin	ug/kg	1.3	NJ	P	I-23
LWG0103R003TSCRWBC00	72-20-8	Endrin	ug/kg	1.1	N		I-23
LWG0103R005TSCRWBC00	72-20-8	Endrin	ug/kg	2.8	NJ	P	I-23
LWG0103R032TSCRWBC00	72-20-8	Endrin	ug/kg	1	U	J	I-23
LWG0104R002TSCRWBC00	72-20-8	Endrin	ug/kg	1	UJ	J	I-23
LWG0104R003TSCRWBC00	72-20-8	Endrin	ug/kg	1	U	JP	I-23
LWG0104R004TSCRWBC10	72-20-8	Endrin	ug/kg	1	U	JP	I-23
LWG0104R023TSSBWBC30	72-20-8	Endrin	ug/kg	1.8	UJ		10
LWG0105R003TSCRWBC00	72-20-8	Endrin	ug/kg	1.2	N		I-23
LWG0105R006TSSBWBC00	72-20-8	Endrin	ug/kg	1.4	UJ		10
LWG0106R001TSCRWBC00	72-20-8	Endrin	ug/kg	1	U	JP	I-23
LWG0106R004TSCRWBC10	72-20-8	Endrin	ug/kg	1	U	J	I-23
LWG0106R024TSSBWBC00	72-20-8	Endrin	ug/kg	1	UJ		10
LWG0107R003TSCRWBC00	72-20-8	Endrin	ug/kg	2	UJ		10
LWG0107R004TSCRWBC00	72-20-8	Endrin	ug/kg	1	U	J	I-23
LWG0108R001TSCRWBC00	72-20-8	Endrin	ug/kg	1	UJ		10
LWG0108R002TSCRWBC00	72-20-8	Endrin	ug/kg	1	UJ		10
LWG0108R003TSCRWBC00	72-20-8	Endrin	ug/kg	1	UJ		10
LWG0109R001TSCRWBC10	72-20-8	Endrin	ug/kg	1	UJ		10
LWG0109R001TSCRWBC20	72-20-8	Endrin	ug/kg	1	UJ		10
LWG0109R002TSCRWBC00	72-20-8	Endrin	ug/kg	1	UJ		10
LWG01FZ0306TSCPFLC10	72-20-8	Endrin	ug/kg	4	UJ		10
LWG01FZ0306TSCPFLC20	72-20-8	Endrin	ug/kg	4	UJ		10
LWG01FZ0306TSCPWBC10	72-20-8	Endrin	ug/kg	1	UJ		10
LWG01FZ0306TSCPWBC30	72-20-8	Endrin	ug/kg	1	UJ		10
LWG01FZ0609TSCPFLC10	72-20-8	Endrin	ug/kg	20	UJ		10

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R001TSSPWBC00	7421-93-4	Endrin aldehyde	ug/kg	1.3	UJ		10
LWG0103R002TSSPWBC10	7421-93-4	Endrin aldehyde	ug/kg	1.3	UJ		10
LWG0103R002TSSPWBC20	7421-93-4	Endrin aldehyde	ug/kg	1.3	UJ		10
LWG0103R004TSCRWBC00	7421-93-4	Endrin aldehyde	ug/kg	1	U	J	I-23
LWG0103R004TSSPWBC10	7421-93-4	Endrin aldehyde	ug/kg	3.6	UJ		10
LWG0103R004TSSPWBC20	7421-93-4	Endrin aldehyde	ug/kg	3.4	UJ		10
LWG0103R005TSSPWBC00	7421-93-4	Endrin aldehyde	ug/kg	4	UJ		10
LWG0103R014TSSBFLC00	7421-93-4	Endrin aldehyde	ug/kg	2	NJ	P	I-23
LWG0103R032TSSPWBC00	7421-93-4	Endrin aldehyde	ug/kg	1.2	UJ		10
LWG0104R002TSSPWBC00	7421-93-4	Endrin aldehyde	ug/kg	1.6	UJ		10
LWG0104R003TSSPWBC00	7421-93-4	Endrin aldehyde	ug/kg	1.3	UJ		10
LWG0104R004TSSPWBC00	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG0104R023TSSBWBC30	7421-93-4	Endrin aldehyde	ug/kg	1.5	UJ		10
LWG0105R001TSSPWBC00	7421-93-4	Endrin aldehyde	ug/kg	1.5	UJ		10
LWG0105R006TSSBFLC00	7421-93-4	Endrin aldehyde	ug/kg	1.5	NJ	P	I-23
LWG0105R006TSSBWBC00	7421-93-4	Endrin aldehyde	ug/kg	2.2	UJ		10
LWG0105R020TSSPWBC00	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG0106R001TSSPWBC00	7421-93-4	Endrin aldehyde	ug/kg	1.4	UJ		10
LWG0106R002TSCAWBC00	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		5
LWG0106R024TSSBFLC00	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG0106R024TSSBWBC00	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG0107R003TSCAWBC00	7421-93-4	Endrin aldehyde	ug/kg	0.39	J	J	5, L
LWG0107R003TSCRWBC00	7421-93-4	Endrin aldehyde	ug/kg	2	UJ		10
LWG0107R003TSSPWBC00	7421-93-4	Endrin aldehyde	ug/kg	1.7	UJ		10
LWG0107R006TSCAWBC00	7421-93-4	Endrin aldehyde	ug/kg	1	UJ	JP	I-23
LWG0107R006TSSPWBC00	7421-93-4	Endrin aldehyde	ug/kg	2.9	UJ		10
LWG0108R001TSCRWBC00	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG0108R002TSCRWBC00	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG0108R002TSSPWBC00	7421-93-4	Endrin aldehyde	ug/kg	1.5	UJ		10
LWG0108R003TSCRWBC00	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG0108R032TSSBFLC00	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG0109R001TSCRWBC10	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG0109R001TSCRWBC20	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG0109R002TSCRWBC00	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG0109R006TSSBFLC00	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG01FZ0306TSBBFLC10	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		5
LWG01FZ0306TSBBFLC20	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG01FZ0306TSBBFLC30	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG01FZ0306TSBBWBC10	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG01FZ0306TSBBWBC20	7421-93-4	Endrin aldehyde	ug/kg	1.7	UJ		10

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0306TSBBWBC30	7421-93-4	Endrin aldehyde	ug/kg	3.7	UJ		10
LWG01FZ0306TSCPFLC10	7421-93-4	Endrin aldehyde	ug/kg	4	UJ		10
LWG01FZ0306TSCPFLC20	7421-93-4	Endrin aldehyde	ug/kg	4	UJ		10
LWG01FZ0306TSCPWBC10	7421-93-4	Endrin aldehyde	ug/kg	2	UJ		10
LWG01FZ0306TSCPWBC30	7421-93-4	Endrin aldehyde	ug/kg	1.8	UJ		10
LWG01FZ0609TSBBFLC10	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		5
LWG01FZ0609TSBBWBC20	7421-93-4	Endrin aldehyde	ug/kg	1.1	UJ		10
LWG01FZ0609TSBCWBC10	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG01FZ0609TSBCWBC20	7421-93-4	Endrin aldehyde	ug/kg	1	UJ		10
LWG0103R001TSSPWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0103R002TSSPWBC10	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0103R002TSSPWBC20	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0103R004TSSPWBC10	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0103R004TSSPWBC20	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0103R005TSSPWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0103R032TSSPWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0104R002TSSPWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0104R003TSSPWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0104R004TSSPWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0104R023TSSBWBC30	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0105R001TSSPWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0105R006TSPMWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0105R006TSSBWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0105R020TSSPWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0106R001TSSPWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0106R024TSSBWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0107R003TSCAWBC00	53494-70-5	Endrin ketone	ug/kg	1	U	JP	I-23
LWG0107R003TSCRWBC00	53494-70-5	Endrin ketone	ug/kg	2	UJ		10
LWG0107R003TSSPWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0107R006TSSPWBC00	53494-70-5	Endrin ketone	ug/kg	1.1	UJ		10
LWG0108R001TSCRWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0108R002TSCRWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0108R002TSSPWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0108R003TSCRWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0108R032TSSBFLC00	53494-70-5	Endrin ketone	ug/kg	1	U	J	I-23
LWG0109R001TSCRWBC10	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0109R001TSCRWBC20	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0109R002TSCRWBC00	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0109R006TSSBFLC00	53494-70-5	Endrin ketone	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBBWBC10	53494-70-5	Endrin ketone	ug/kg	1	UJ		10

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0306TSBBWBC20	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG01FZ0306TSBBWBC30	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG01FZ0306TSCPFLC10	53494-70-5	Endrin ketone	ug/kg	4	UJ		10
LWG01FZ0306TSCPFLC20	53494-70-5	Endrin ketone	ug/kg	4	UJ		10
LWG01FZ0306TSCPWBC10	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG01FZ0306TSCPWBC30	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG01FZ0609TSBBWBC20	53494-70-5	Endrin ketone	ug/kg	1	UJ		10
LWG0102R015TSSPWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	U	JP	I-23
LWG0103R001TSCRWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0103R001TSSPWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	2.6	NJ		I-23
LWG0103R002TSCRWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0103R002TSSPWBC10	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1.7	NJ	P	I-23
LWG0103R002TSSPWBC20	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1.3	NJ	P	I-23
LWG0103R004TSSPWBC10	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	3.1	NJ	P	I-23
LWG0103R004TSSPWBC20	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	2.5	NJ	P	I-23
LWG0103R014TSLSWBC10	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	U	J	I-23
LWG0103R014TSLSWBC20	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4.5	NJ		I-23
LWG0103R014TSSBWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	U	J	I-23
LWG0103R032TSCRWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0103R032TSSPWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1.7	N		I-23
LWG0103R034TSSPWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	U	JP	I-23
LWG0104R002TSSPWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1.5	NJ		I-23
LWG0104R003TSSPWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0104R004TSCRWBC20	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1	U	J	I-23
LWG0104R004TSSPWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1.2	NJ	P	I-23
LWG0104R023TSSBWBC20	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	UJ	J	I-23
LWG0105R020TSSPWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1.7	NJ	P	I-23
LWG0106R001TSSPWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	2.7	NJ	P	I-23
LWG0106R004TSSPWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	UJ	JP	I-23
LWG0107R009TSSBWBC10	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	U	J	I-23
LWG0108R001TSCRWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0108R002TSCRWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1	U	JP	I-23
LWG0108R002TSSPWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1.1	NJ	P	I-23
LWG0108R003TSCRWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1	U	J	I-23
LWG0108R003TSSPWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	U	J	I-23
LWG0108R010TSLSWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	U	JP	I-23
LWG0108R032TSSBWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	UJ	P	I-23
LWG0109R006TSSBWBC00	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	U	J	I-23
LWG01FZ0306TSBBWBC10	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1	U	J	I-23
LWG01FZ0306TSBBWBC20	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1.4	N		I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0306TSBBWBC30	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1.5	N		I-23
LWG01FZ0306TSCPFLC10	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	UJ	J	I-23
LWG01FZ0306TSCPFLC20	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	UJ		10
LWG01FZ0306TSCPFLC30	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	UJ	JP	I-23
LWG01FZ0609TSBBWBC20	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	1.9	N		I-23
LWG01FZ0609TSCPFLC20	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	U	J	I-23
LWG01FZ0609TSCPWBC10	58-89-9	gamma-Hexachlorocyclohexane	ug/kg	4	U	J	I-23
LWG0108R010TSLSWBC00	76-44-8	Heptachlor	ug/kg	4	U	JP	I-23
LWG01FZ0306TSBCWBC10	76-44-8	Heptachlor	ug/kg	1.8	N		I-23
LWG0102R001TSCRWBC00	1024-57-3	Heptachlor epoxide	ug/kg	1	U	J	I-23
LWG0102R015TSCRWBC00	1024-57-3	Heptachlor epoxide	ug/kg	1	U	JP	I-23
LWG0102R015TSSPWBC00	1024-57-3	Heptachlor epoxide	ug/kg	4	U	J	I-23
LWG0103R001TSSPWBC00	1024-57-3	Heptachlor epoxide	ug/kg	3.2	NJ	P	I-23
LWG0103R004TSCRWBC00	1024-57-3	Heptachlor epoxide	ug/kg	1	U	JP	I-23
LWG0103R004TSSPWBC20	1024-57-3	Heptachlor epoxide	ug/kg	2	NJ	P	I-23
LWG0103R005TSSPWBC00	1024-57-3	Heptachlor epoxide	ug/kg	1	U	J	I-23
LWG0103R014TSLSWBC10	1024-57-3	Heptachlor epoxide	ug/kg	4	U	JP	I-23
LWG0103R014TSSBWBC00	1024-57-3	Heptachlor epoxide	ug/kg	4	U	JP	I-23
LWG0103R034TSSPWBC00	1024-57-3	Heptachlor epoxide	ug/kg	4	U	J	I-23
LWG0104R003TSSPWBC00	1024-57-3	Heptachlor epoxide	ug/kg	1	U	P	I-23
LWG0105R001TSCRWBC00	1024-57-3	Heptachlor epoxide	ug/kg	1	U	JP	I-23
LWG0106R002TSCAWBC00	1024-57-3	Heptachlor epoxide	ug/kg	2.1	N		I-23
LWG0106R024TSSBWBC00	1024-57-3	Heptachlor epoxide	ug/kg	1	U	J	I-23
LWG0107R003TSCAWBC00	1024-57-3	Heptachlor epoxide	ug/kg	1.3	NJ	P	I-23
LWG0107R003TSSPWBC00	1024-57-3	Heptachlor epoxide	ug/kg	1	U	J	I-23
LWG0107R006TSCRWBC00	1024-57-3	Heptachlor epoxide	ug/kg	1	U	J	I-23
LWG0108R010TSPMWBC00	1024-57-3	Heptachlor epoxide	ug/kg	1	U	JP	I-23
LWG0109R006TSPMWBC00	1024-57-3	Heptachlor epoxide	ug/kg	1	U	J	I-23
LWG01FZ0306TSBBWBC20	1024-57-3	Heptachlor epoxide	ug/kg	1	U	J	I-23
LWG01FZ0306TSBCWBC10	1024-57-3	Heptachlor epoxide	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBCWBC20	1024-57-3	Heptachlor epoxide	ug/kg	1	UJ	J	I-23
LWG01FZ0306TSCPFLC30	1024-57-3	Heptachlor epoxide	ug/kg	4	UJ	JP	I-23
LWG01FZ0609TSBBWBC20	1024-57-3	Heptachlor epoxide	ug/kg	1	U	JP	I-23
LWG01FZ0609TSBCWBC10	1024-57-3	Heptachlor epoxide	ug/kg	1	U	JP	I-23
LWG01FZ0609TSBCWBC20	1024-57-3	Heptachlor epoxide	ug/kg	1	U	J	I-23
LWG0102R001TSSPWBC00	118-74-1	Hexachlorobenzene	ug/kg	4	U	J	I-23
LWG0102R015TSSPWBC00	118-74-1	Hexachlorobenzene	ug/kg	4	U	JP	I-23
LWG0103R014TSNPWBC20	118-74-1	Hexachlorobenzene	ug/kg	4	U	JP	I-23
LWG0103R014TSPMWBC00	118-74-1	Hexachlorobenzene	ug/kg	7.3	N		I-23
LWG0103R014TSSBFLC00	118-74-1	Hexachlorobenzene	ug/kg	1.3	U		I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0105R006TSNPWBC00	118-74-1	Hexachlorobenzene	ug/kg	4	U	JP	I-23
LWG0105R006TSPMWBC00	118-74-1	Hexachlorobenzene	ug/kg	3.8	U	P	I-23
LWG0105R006TSSBFLC00	118-74-1	Hexachlorobenzene	ug/kg	1	U	J	I-23
LWG0106R024TSSBFLC00	118-74-1	Hexachlorobenzene	ug/kg	1	U	J	I-23
LWG0108R010TSLSWBC00	118-74-1	Hexachlorobenzene	ug/kg	4	U	J	I-23
LWG0108R010TSPMWBC00	118-74-1	Hexachlorobenzene	ug/kg	5.7	N		I-23
LWG0108R032TSSBFLC00	118-74-1	Hexachlorobenzene	ug/kg	1	U	J	I-23
LWG0109R006TSPMWBC00	118-74-1	Hexachlorobenzene	ug/kg	5.7	N		I-23
LWG01FZ0306TSBBFLC30	118-74-1	Hexachlorobenzene	ug/kg	1	U	J	I-23
LWG01FZ0306TSBBWBC10	118-74-1	Hexachlorobenzene	ug/kg	1	U	J	I-23
LWG01FZ0306TSBCFLC10	118-74-1	Hexachlorobenzene	ug/kg	1	U	J	I-23
LWG01FZ0609TSBBWBC30	118-74-1	Hexachlorobenzene	ug/kg	4	U	JP	I-23
LWG01FZ0609TSBCWBC10	118-74-1	Hexachlorobenzene	ug/kg	8.1	N		I-23
LWG01FZ0609TSBCWBC20	118-74-1	Hexachlorobenzene	ug/kg	5.7	N		I-23
LWG01FZ0609TSCPFLC20	118-74-1	Hexachlorobenzene	ug/kg	4.2	N		I-23
LWG01FZ0609TSCPWBC10	118-74-1	Hexachlorobenzene	ug/kg	4	U	JP	I-23
LWG0102R001TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0102R001TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ	P	I-23
LWG0102R015TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0102R015TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ		5
LWG0103R001TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0103R002TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0103R002TSSPWBC10	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	JP	I-23
LWG0103R002TSSPWBC20	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		5,10
LWG0103R003TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1.2	UJ		10
LWG0103R004TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0103R004TSSPWBC20	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	J	I-23
LWG0103R005TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0103R005TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		5,10
LWG0103R014TSNPWBC20	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ		10
LWG0103R014TSPMWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	P	I-23
LWG0103R014TSSBFLC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0103R014TSSBWBC00	87-68-3	Hexachlorobutadiene	ug/kg	4	U	JP	I-23
LWG0103R032TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0103R032TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	U	JP	5,10
LWG0103R034TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	4	U	JP	5
LWG0104R002TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0104R002TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	J	I-23
LWG0104R003TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0104R003TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		5,10

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0104R004TSCRWBC10	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0104R004TSCRWBC20	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0104R004TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	U	J	5,10
LWG0104R023TSSBWBC10	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ	JP	I-23
LWG0104R023TSSBWBC20	87-68-3	Hexachlorobutadiene	ug/kg	4	U	J	I-23
LWG0105R001TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0105R001TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	J	I-23
LWG0105R003TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0105R006TSLSWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1.1	UJ	P	I-23
LWG0105R006TSNPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ		10
LWG0105R006TSPMWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	JP	I-23
LWG0105R006TSSBFLC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0105R020TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	J	I-23
LWG0106R001TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0106R001TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	2	J		5,10,13
LWG0106R002TSCAWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0106R002TSSPWBC10	87-68-3	Hexachlorobutadiene	ug/kg	4	U	JP	I-23
LWG0106R004TSCRWBC10	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0106R004TSCRWBC20	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0106R004TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ	J	I-23
LWG0106R024TSSBFLC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0106R024TSSBWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0106R031TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0107R003TSCAWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	JP	I-23
LWG0107R003TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	2	UJ		10
LWG0107R003TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		5,10
LWG0107R004TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0107R006TSCAWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0107R006TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0107R009TSSBWBC10	87-68-3	Hexachlorobutadiene	ug/kg	4	U	J	I-23
LWG0107R009TSSBWBC20	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ		10
LWG0107R009TSSBWBC30	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ	J	I-23
LWG0108R001TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0108R002TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0108R002TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	J	I-23
LWG0108R003TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0108R010TSNPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	9.8	UJ	JP	I-23
LWG0108R010TSPMWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	JP	I-23
LWG0108R032TSSBFLC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0108R032TSSBWBC00	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ		I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0109R001TSCRWBC10	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0109R001TSCRWBC20	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0109R002TSCRWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0109R002TSSPWBC00	87-68-3	Hexachlorobutadiene	ug/kg	9.6	UJ		5
LWG0109R006TSPMWBC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	JP	I-23
LWG0109R006TSSBFLC00	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG0109R006TSSBWBC00	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ	J	I-23
LWG01FZ0306TSBBFLC10	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		5
LWG01FZ0306TSBBFLC20	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG01FZ0306TSBBFLC30	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG01FZ0306TSBBWBC10	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		5,10
LWG01FZ0306TSBBWBC20	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		5,10
LWG01FZ0306TSBBWBC30	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	JP	I-23
LWG01FZ0306TSBCFLC10	87-68-3	Hexachlorobutadiene	ug/kg	1	U	J	I-23
LWG01FZ0306TSBCWBC10	87-68-3	Hexachlorobutadiene	ug/kg	1.4	NJ		I-23
LWG01FZ0306TSBCWBC20	87-68-3	Hexachlorobutadiene	ug/kg	1.3	NJ		I-23
LWG01FZ0306TSCPFLC10	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ		5,10
LWG01FZ0306TSCPFLC20	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ		10
LWG01FZ0306TSCPWBC10	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG01FZ0609TSBBFLC10	87-68-3	Hexachlorobutadiene	ug/kg	1	U	JP	I-23
LWG01FZ0609TSBBFLC30	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ		5
LWG01FZ0609TSBBWBC20	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	J	I-23
LWG01FZ0609TSBCFLC20	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ		10
LWG01FZ0609TSBCWBC10	87-68-3	Hexachlorobutadiene	ug/kg	2.3	NJ		I-23
LWG01FZ0609TSBCWBC20	87-68-3	Hexachlorobutadiene	ug/kg	1	UJ	J	I-23
LWG01FZ0609TSCPWBC20	87-68-3	Hexachlorobutadiene	ug/kg	4	UJ		5
LWG0102R001TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0102R015TSCRWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0102R015TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0103R001TSCRWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0103R002TSSPWBC10	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0103R002TSSPWBC20	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0103R003TSCRWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0103R004TSSPWBC20	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0103R005TSCRWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0103R005TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0103R014TSNPWBC10	67-72-1	Hexachloroethane	ug/kg	9.9	UJ		10
LWG0103R014TSNPWBC20	67-72-1	Hexachloroethane	ug/kg	5.9	UJ	P	I-23
LWG0103R014TSPMWBC00	67-72-1	Hexachloroethane	ug/kg	3.7	NJ		I-23
LWG0103R014TSSBFLC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0103R014TSSBWBC00	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0103R032TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0103R034TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0104R002TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0104R003TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0104R004TSCRWBC10	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0104R004TSCRWBC20	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0104R004TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0104R023TSSBWBC10	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0104R023TSSBWBC20	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0104R023TSSBWBC30	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0105R001TSCRWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0105R001TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0105R006TSLSWBC00	67-72-1	Hexachloroethane	ug/kg	2.6	UJ		10
LWG0105R006TSNPWBC00	67-72-1	Hexachloroethane	ug/kg	4	UJ		10
LWG0105R006TSPMWBC00	67-72-1	Hexachloroethane	ug/kg	2.6	NJ	P	I-23
LWG0105R006TSSBFLC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0105R006TSSBWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0105R020TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0106R001TSCRWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0106R001TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0106R002TSSPWBC10	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0106R004TSCRWBC10	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0106R004TSCRWBC20	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0106R004TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0106R024TSSBFLC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0106R024TSSBWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0107R003TSCRWBC00	67-72-1	Hexachloroethane	ug/kg	2	UJ		10
LWG0107R003TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0107R006TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG0107R009TSSBWBC10	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0107R009TSSBWBC20	67-72-1	Hexachloroethane	ug/kg	4	UJ		10
LWG0107R009TSSBWBC30	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0108R001TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0108R002TSCRWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ	JP	I-23
LWG0108R010TSNPWBC00	67-72-1	Hexachloroethane	ug/kg	9.8	UJ		10
LWG0108R010TSPMWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0108R032TSSBFLC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0108R032TSSBWBC00	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0109R001TSCRWBC20	67-72-1	Hexachloroethane	ug/kg	1.2	UJ	P	I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0109R001TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0109R002TSSPWBC00	67-72-1	Hexachloroethane	ug/kg	9.6	UJ		5
LWG0109R006TSLSWBC00	67-72-1	Hexachloroethane	ug/kg	4	UJ	P	I-23
LWG0109R006TSNPWBC00	67-72-1	Hexachloroethane	ug/kg	10	UJ		10
LWG0109R006TSPMWBC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0109R006TSSBFLC00	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG0109R006TSSBWBC00	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG01FZ0306TSBBFLC10	67-72-1	Hexachloroethane	ug/kg	1	UJ		5
LWG01FZ0306TSBBFLC20	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG01FZ0306TSBBFLC30	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG01FZ0306TSBBWBC10	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG01FZ0306TSBBWBC20	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG01FZ0306TSBBWBC30	67-72-1	Hexachloroethane	ug/kg	1	UJ		5,10
LWG01FZ0306TSBCWBC10	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG01FZ0306TSBCWBC20	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG01FZ0306TSCPFLC10	67-72-1	Hexachloroethane	ug/kg	4	UJ		5,10
LWG01FZ0306TSCPFLC20	67-72-1	Hexachloroethane	ug/kg	4	UJ		10
LWG01FZ0306TSCPFLC30	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG01FZ0306TSCPWBC10	67-72-1	Hexachloroethane	ug/kg	2	UJ		10
LWG01FZ0609TSBBFLC30	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG01FZ0609TSBBWBC30	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG01FZ0609TSBCFLC20	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG01FZ0609TSBCWBC10	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG01FZ0609TSBCWBC20	67-72-1	Hexachloroethane	ug/kg	1	UJ		10
LWG01FZ0609TSCPFLC20	67-72-1	Hexachloroethane	ug/kg	4	UJ		5
LWG0103R001TSSPWBC00	72-43-5	Methoxychlor	ug/kg	1.2	NJ		I-23
LWG0103R002TSSPWBC10	72-43-5	Methoxychlor	ug/kg	1.8	NJ	P	I-23
LWG0103R002TSSPWBC20	72-43-5	Methoxychlor	ug/kg	1.4	N		I-23
LWG0103R004TSSPWBC10	72-43-5	Methoxychlor	ug/kg	2.8	N		I-23
LWG0103R004TSSPWBC20	72-43-5	Methoxychlor	ug/kg	2.9	N		I-23
LWG0103R014TSLSWBC20	72-43-5	Methoxychlor	ug/kg	4	U	J	I-23
LWG0103R014TSNPWBC20	72-43-5	Methoxychlor	ug/kg	4.8	U	P	I-23
LWG0103R032TSSPWBC00	72-43-5	Methoxychlor	ug/kg	3.2	NJ	P	I-23
LWG0104R003TSSPWBC00	72-43-5	Methoxychlor	ug/kg	7.6	N		I-23
LWG0104R004TSSPWBC00	72-43-5	Methoxychlor	ug/kg	1.3	NJ	P	I-23
LWG0105R020TSSPWBC00	72-43-5	Methoxychlor	ug/kg	1.5	NJ	P	I-23
LWG0106R001TSSPWBC00	72-43-5	Methoxychlor	ug/kg	1.7	NJ		I-23
LWG0106R002TSCAWBC00	72-43-5	Methoxychlor	ug/kg	1.6	UJ		5
LWG0106R004TSCRWBC10	72-43-5	Methoxychlor	ug/kg	1	U	J	I-23
LWG0107R003TSCAWBC00	72-43-5	Methoxychlor	ug/kg	1	UJ		5

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0107R006TSCAWBC00	72-43-5	Methoxychlor	ug/kg	1	UJ		5
LWG0107R009TSSBWBC20	72-43-5	Methoxychlor	ug/kg	4	U	JP	I-23
LWG0108R001TSCRWBC00	72-43-5	Methoxychlor	ug/kg	1	U	J	I-23
LWG0108R002TSSPWBC00	72-43-5	Methoxychlor	ug/kg	2.3	NJ	P	I-23
LWG0108R010TSNPWBC00	72-43-5	Methoxychlor	ug/kg	10	U	P	I-23
LWG01FZ0306TSBBFLC10	72-43-5	Methoxychlor	ug/kg	1	UJ		5
LWG01FZ0306TSBBWBC10	72-43-5	Methoxychlor	ug/kg	1.1	NJ	P	I-23
LWG01FZ0306TSBBWBC20	72-43-5	Methoxychlor	ug/kg	1	UJ	P	I-23
LWG01FZ0306TSBCFLC10	72-43-5	Methoxychlor	ug/kg	1	U	J	I-23
LWG01FZ0306TSBCFLC20	72-43-5	Methoxychlor	ug/kg	1	U	JP	I-23
LWG01FZ0306TSCPFLC20	72-43-5	Methoxychlor	ug/kg	7.2	NJ	P	I-23
LWG01FZ0306TSCPWBC10	72-43-5	Methoxychlor	ug/kg	4.2	N		I-23
LWG01FZ0609TSBBFLC10	72-43-5	Methoxychlor	ug/kg	1	UJ		5
LWG01FZ0609TSBCFLC10	72-43-5	Methoxychlor	ug/kg	1	U	JP	I-23
LWG0102R001TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0102R015TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0103R001TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0103R002TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0103R003TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0103R004TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0103R005TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0103R032TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0104R002TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0104R003TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0104R004TSCRWBC10	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0104R004TSCRWBC20	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0104R023TSSBWBC30	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0105R001TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0105R003TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0105R006TSSBWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0106R001TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0106R002TSSPWBC10	2385-85-5	Mirex	ug/kg	4	UJ		5
LWG0106R004TSCRWBC10	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0106R004TSCRWBC20	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0106R004TSSPWBC00	2385-85-5	Mirex	ug/kg	4	UJ		5
LWG0106R024TSSBWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0106R031TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0107R003TSCRWBC00	2385-85-5	Mirex	ug/kg	2	UJ		10
LWG0107R004TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0108R001TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0108R002TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0108R003TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0109R001TSCRWBC10	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0109R001TSCRWBC20	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG0109R001TSSPWBC00	2385-85-5	Mirex	ug/kg	4	UJ		5
LWG0109R002TSCRWBC00	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG01FZ0306TSCPFLC20	2385-85-5	Mirex	ug/kg	4	UJ		10
LWG01FZ0306TSCPWBC10	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG01FZ0306TSCPWBC30	2385-85-5	Mirex	ug/kg	1	UJ		10
LWG01FZ0609TSBBWBC30	2385-85-5	Mirex	ug/kg	4	UJ		5
LWG0102R001TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0102R015TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ	J	I-23
LWG0103R001TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0103R002TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0103R003TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0103R004TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ	JP	I-23
LWG0103R005TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0103R014TSPMWBC00	27304-13-8	Oxychlordane	ug/kg	1	U	J	I-23
LWG0103R032TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0104R002TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0104R003TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0104R004TSCRWBC10	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0104R004TSCRWBC20	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0104R023TSSBWBC10	27304-13-8	Oxychlordane	ug/kg	4	UJ	J	I-23
LWG0105R001TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ	JP	I-23
LWG0105R003TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ	J	I-23
LWG0105R006TSLSWBC00	27304-13-8	Oxychlordane	ug/kg	2.3	N		I-23
LWG0106R001TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0106R002TSSPWBC10	27304-13-8	Oxychlordane	ug/kg	4	UJ		5
LWG0106R002TSSPWBC20	27304-13-8	Oxychlordane	ug/kg	20	U	J	I-23
LWG0106R004TSCRWBC10	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0106R004TSCRWBC20	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0106R004TSSPWBC00	27304-13-8	Oxychlordane	ug/kg	4	UJ		5
LWG0106R024TSSBWBC00	27304-13-8	Oxychlordane	ug/kg	1	U	J	I-23
LWG0106R031TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ	JP	I-23
LWG0107R004TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	UJ		10
LWG0108R001TSCRWBC00	27304-13-8	Oxychlordane	ug/kg	1	U	JP	I-23
LWG0108R001TSSPWBC00	27304-13-8	Oxychlordane	ug/kg	4	UJ		5
LWG0109R001TSSPWBC00	27304-13-8	Oxychlordane	ug/kg	4	UJ		5
LWG0109R006TSSBFLC00	27304-13-8	Oxychlordane	ug/kg	1	U	JP	I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0109R006TSSBWBC00	27304-13-8	Oxychlordane	ug/kg	4	U	JP	I-23
LWG01FZ0306TSBBFLC10	27304-13-8	Oxychlordane	ug/kg	1	U	J	I-23
LWG01FZ0306TSBCWBC10	27304-13-8	Oxychlordane	ug/kg	2.3	N		I-23
LWG01FZ0306TSBCWBC20	27304-13-8	Oxychlordane	ug/kg	2.2	NJ		I-23
LWG01FZ0306TSCPWBC10	27304-13-8	Oxychlordane	ug/kg	1.1	NJ	P	I-23
LWG01FZ0306TSCPWBC30	27304-13-8	Oxychlordane	ug/kg	1	U	JP	I-23
LWG01FZ0609TSBBFLC10	27304-13-8	Oxychlordane	ug/kg	1	U	JP	I-23
LWG01FZ0609TSBBWBC30	27304-13-8	Oxychlordane	ug/kg	4	UJ		5
LWG01FZ0609TSBCFLC20	27304-13-8	Oxychlordane	ug/kg	1	U	J	I-23
LWG0102R001TSSPWBC00	8001-35-2	Toxaphene	ug/kg	350	UJ		5
LWG0102R015TSSPWBC00	8001-35-2	Toxaphene	ug/kg	590	UJ		5
LWG0103R034TSSPWBC00	8001-35-2	Toxaphene	ug/kg	950	UJ		5
LWG0104R023TSSBWBC30	8001-35-2	Toxaphene	ug/kg	410	UJ		10
LWG0105R006TSSBWBC00	8001-35-2	Toxaphene	ug/kg	450	UJ		10
LWG0106R002TSSPWBC10	8001-35-2	Toxaphene	ug/kg	290	UJ		5
LWG0106R004TSSPWBC00	8001-35-2	Toxaphene	ug/kg	200	UJ		5
LWG0106R024TSSBWBC00	8001-35-2	Toxaphene	ug/kg	350	UJ		10
LWG0107R003TSCRWBC00	8001-35-2	Toxaphene	ug/kg	99	UJ		10
LWG0107R009TSSBWBC30	8001-35-2	Toxaphene	ug/kg	550	UJ		5
LWG0108R001TSCRWBC00	8001-35-2	Toxaphene	ug/kg	150	UJ		10
LWG0108R001TSSPWBC00	8001-35-2	Toxaphene	ug/kg	400	UJ		5
LWG0108R002TSCRWBC00	8001-35-2	Toxaphene	ug/kg	50	UJ		10
LWG0108R003TSCRWBC00	8001-35-2	Toxaphene	ug/kg	50	UJ		10
LWG0108R032TSSBWBC00	8001-35-2	Toxaphene	ug/kg	620	UJ		5
LWG0109R001TSCRWBC10	8001-35-2	Toxaphene	ug/kg	93	UJ		10
LWG0109R001TSCRWBC20	8001-35-2	Toxaphene	ug/kg	60	UJ		10
LWG0109R001TSSPWBC00	8001-35-2	Toxaphene	ug/kg	340	UJ		5
LWG0109R002TSCRWBC00	8001-35-2	Toxaphene	ug/kg	150	UJ		10
LWG0109R006TSSBWBC00	8001-35-2	Toxaphene	ug/kg	690	UJ		5
LWG01FZ0306TSBBFLC10	8001-35-2	Toxaphene	ug/kg	160	UJ		5
LWG01FZ0306TSBCFLC10	8001-35-2	Toxaphene	ug/kg	50	UJ	P	I-23
LWG01FZ0306TSCPFLC10	8001-35-2	Toxaphene	ug/kg	580	UJ		5,10
LWG01FZ0306TSCPFLC20	8001-35-2	Toxaphene	ug/kg	680	UJ		10
LWG01FZ0306TSCPFLC30	8001-35-2	Toxaphene	ug/kg	750	UJ		5
LWG01FZ0306TSCPWBC10	8001-35-2	Toxaphene	ug/kg	420	UJ		10
LWG01FZ0306TSCPWBC30	8001-35-2	Toxaphene	ug/kg	570	UJ		10
LWG01FZ0609TSBBWBC30	8001-35-2	Toxaphene	ug/kg	960	UJ		5
LWG01FZ0609TSCPFLC10	8001-35-2	Toxaphene	ug/kg	2500	UJ		10
LWG01FZ0609TSCPFLC20	8001-35-2	Toxaphene	ug/kg	610	UJ		5
LWG01FZ0609TSCPFLC30	8001-35-2	Toxaphene	ug/kg	2600	UJ		5

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0609TSCPWBC10	8001-35-2	Toxaphene	ug/kg	1200	UJ		5
LWG01FZ0609TSCPWBC20	8001-35-2	Toxaphene	ug/kg	700	UJ		5
LWG0102R001TSCRWBC00	5103-74-2	trans-Chlordane	ug/kg	1.1	NJ	P	I-23
LWG0102R015TSCRWBC00	5103-74-2	trans-Chlordane	ug/kg	1.3	NJ	P	I-23
LWG0103R002TSSPWBC10	5103-74-2	trans-Chlordane	ug/kg	4.4	NJ	P	I-23
LWG0103R004TSCRWBC00	5103-74-2	trans-Chlordane	ug/kg	1	U	JP	I-23
LWG0103R005TSCRWBC00	5103-74-2	trans-Chlordane	ug/kg	1	N		I-23
LWG0104R004TSCRWBC10	5103-74-2	trans-Chlordane	ug/kg	2.7	NJ	P	I-23
LWG0104R023TSSBWBC30	5103-74-2	trans-Chlordane	ug/kg	1	UJ		10
LWG0105R001TSCRWBC00	5103-74-2	trans-Chlordane	ug/kg	1.9	NJ	P	I-23
LWG0105R006TSSBWBC00	5103-74-2	trans-Chlordane	ug/kg	1	UJ		10
LWG0106R001TSCRWBC00	5103-74-2	trans-Chlordane	ug/kg	1	U	J	I-23
LWG0106R002TSCAWBC00	5103-74-2	trans-Chlordane	ug/kg	1.8	NJ	P	I-23
LWG0106R004TSCRWBC20	5103-74-2	trans-Chlordane	ug/kg	1	U	JP	I-23
LWG0106R024TSSBWBC00	5103-74-2	trans-Chlordane	ug/kg	1	UJ		10
LWG0107R003TSCAWBC00	5103-74-2	trans-Chlordane	ug/kg	1.1	NJ	P	I-23
LWG0107R003TSCRWBC00	5103-74-2	trans-Chlordane	ug/kg	2	UJ	J	I-23
LWG0108R001TSCRWBC00	5103-74-2	trans-Chlordane	ug/kg	1	UJ	J	I-23
LWG0108R002TSCRWBC00	5103-74-2	trans-Chlordane	ug/kg	1	UJ	JP	I-23
LWG0108R003TSCRWBC00	5103-74-2	trans-Chlordane	ug/kg	1	UJ	J	I-23
LWG0109R001TSCRWBC10	5103-74-2	trans-Chlordane	ug/kg	1	UJ	J	I-23
LWG0109R001TSCRWBC20	5103-74-2	trans-Chlordane	ug/kg	1	UJ		10
LWG0109R002TSCRWBC00	5103-74-2	trans-Chlordane	ug/kg	1	UJ	JP	I-23
LWG01FZ0306TSCPWBC10	5103-74-2	trans-Chlordane	ug/kg	1	UJ		10
LWG01FZ0306TSCPWBC30	5103-74-2	trans-Chlordane	ug/kg	1	UJ		10
LWG01FZ0609TSBCWBC10	5103-74-2	trans-Chlordane	ug/kg	3.7	N		I-23
LWG0102R001TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ		10
LWG0102R015TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ		10
LWG0103R001TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ	JP	I-23
LWG0103R001TSSPWBC00	39765-80-5	trans-Nonachlor	ug/kg	5.5	NJ		I-23
LWG0103R002TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ	JP	I-23
LWG0103R002TSSPWBC10	39765-80-5	trans-Nonachlor	ug/kg	5	NJ	P	I-23
LWG0103R002TSSPWBC20	39765-80-5	trans-Nonachlor	ug/kg	6.5	NJ	P	I-23
LWG0103R003TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ		10
LWG0103R004TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ	JP	I-23
LWG0103R005TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ		10
LWG0103R014TSLSWBC20	39765-80-5	trans-Nonachlor	ug/kg	9.6	NJ	P	I-23
LWG0103R014TSSBFLC00	39765-80-5	trans-Nonachlor	ug/kg	4.1	NJ	P	I-23
LWG0103R032TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ	JP	I-23
LWG0103R032TSSPWBC00	39765-80-5	trans-Nonachlor	ug/kg	5.6	NJ		I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0104R002TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ	JP	I-23
LWG0104R002TSSPWBC00	39765-80-5	trans-Nonachlor	ug/kg	5.2	NJ	P	I-23
LWG0104R003TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ		10
LWG0104R003TSSPWBC00	39765-80-5	trans-Nonachlor	ug/kg	6.1	NJ	P	I-23
LWG0104R004TSCRWBC10	39765-80-5	trans-Nonachlor	ug/kg	1	UJ		10
LWG0104R004TSCRWBC20	39765-80-5	trans-Nonachlor	ug/kg	1	UJ		10
LWG0104R004TSSPWBC00	39765-80-5	trans-Nonachlor	ug/kg	4.8	N		I-23
LWG0105R001TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ		10
LWG0105R003TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ	JP	I-23
LWG0105R006TSLSWBC00	39765-80-5	trans-Nonachlor	ug/kg	6.3	NJ	P	I-23
LWG0105R006TSSBFLC00	39765-80-5	trans-Nonachlor	ug/kg	2.4	U	P	I-23
LWG0105R020TSSPWBC00	39765-80-5	trans-Nonachlor	ug/kg	4.8	NJ	P	I-23
LWG0106R001TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ	J	I-23
LWG0106R001TSSPWBC00	39765-80-5	trans-Nonachlor	ug/kg	5	NJ	P	I-23
LWG0106R002TSCAWBC00	39765-80-5	trans-Nonachlor	ug/kg	2.7	NJ	P	I-23
LWG0106R002TSSPWBC10	39765-80-5	trans-Nonachlor	ug/kg	4	UJ	JP	I-23
LWG0106R004TSCRWBC10	39765-80-5	trans-Nonachlor	ug/kg	1	UJ		10
LWG0106R004TSCRWBC20	39765-80-5	trans-Nonachlor	ug/kg	1	UJ		10
LWG0106R024TSSBFLC00	39765-80-5	trans-Nonachlor	ug/kg	1.8	NJ	P	I-23
LWG0106R031TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ		10
LWG0107R003TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	2	UJ	J	I-23
LWG0107R004TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	UJ	JP	I-23
LWG0108R001TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	U	J	I-23
LWG0108R001TSSPWBC00	39765-80-5	trans-Nonachlor	ug/kg	4	UJ		5
LWG0108R002TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	U	J	I-23
LWG0108R002TSSPWBC00	39765-80-5	trans-Nonachlor	ug/kg	5.8	NJ	P	I-23
LWG0108R003TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	U	J	I-23
LWG0108R010TSNPWBC00	39765-80-5	trans-Nonachlor	ug/kg	14	U	P	I-23
LWG0108R032TSSBFLC00	39765-80-5	trans-Nonachlor	ug/kg	3	NJ	P	I-23
LWG0109R001TSCRWBC10	39765-80-5	trans-Nonachlor	ug/kg	1	UJ	JP	I-23
LWG0109R001TSCRWBC20	39765-80-5	trans-Nonachlor	ug/kg	1	U	J	I-23
LWG0109R002TSCRWBC00	39765-80-5	trans-Nonachlor	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBBFLC10	39765-80-5	trans-Nonachlor	ug/kg	1.3	N		I-23
LWG01FZ0306TSBBFLC20	39765-80-5	trans-Nonachlor	ug/kg	1.2	NJ	P	I-23
LWG01FZ0306TSBBFLC30	39765-80-5	trans-Nonachlor	ug/kg	1.6	NJ	P	I-23
LWG01FZ0306TSBBWBC10	39765-80-5	trans-Nonachlor	ug/kg	1.8	NJ	P	I-23
LWG01FZ0306TSBBWBC30	39765-80-5	trans-Nonachlor	ug/kg	3.7	NJ	P	I-23
LWG01FZ0306TSBCFLC10	39765-80-5	trans-Nonachlor	ug/kg	1	U	JP	I-23
LWG01FZ0306TSBCFLC20	39765-80-5	trans-Nonachlor	ug/kg	1.1	NJ	P	I-23
LWG01FZ0306TSBCWBC10	39765-80-5	trans-Nonachlor	ug/kg	3.2	NJ	P	I-23

Table E-22. Qualified Data for Pesticides in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0306TSBCWBC20	39765-80-5	trans-Nonachlor	ug/kg	3.5	NJ	P	I-23
LWG01FZ0306TSCPWBC10	39765-80-5	trans-Nonachlor	ug/kg	10	NJ	P	I-23
LWG01FZ0609TSBBFLC10	39765-80-5	trans-Nonachlor	ug/kg	1.6	NJ	P	I-23
LWG01FZ0609TSBBWBC20	39765-80-5	trans-Nonachlor	ug/kg	5.6	NJ	P	I-23
LWG01FZ0609TSBBWBC30	39765-80-5	trans-Nonachlor	ug/kg	4	UJ	JP	I-23
LWG01FZ0609TSBCFLC20	39765-80-5	trans-Nonachlor	ug/kg	1	U	JP	I-23
LWG01FZ0609TSCPFLC20	39765-80-5	trans-Nonachlor	ug/kg	4	U	P	I-23

Notes:

[a] Rejected data are not included in this summary.

[b] Qualifiers, laboratory flags, and data qualifier reason codes are defined in Table X-1.

[c] Laboratory flags are only included when they describe quality control exceedances that resulted in qualification of data.

Table E-23. Qualified Data for PCB Aroclors in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0102R001TSSPWBC00	53469-21-9	Aroclor 1242	ug/kg	38	UJ		5
LWG0103R001TSSPWBC00	53469-21-9	Aroclor 1242	ug/kg	1.9	UJ		5
LWG0103R002TSSPWBC10	53469-21-9	Aroclor 1242	ug/kg	1.9	UJ		5
LWG0103R002TSSPWBC20	53469-21-9	Aroclor 1242	ug/kg	1.9	UJ		5
LWG0103R014TSLSWBC10	53469-21-9	Aroclor 1242	ug/kg	38	UJ		5
LWG0104R002TSSPWBC00	53469-21-9	Aroclor 1242	ug/kg	9.5	UJ		5
LWG0104R003TSSPWBC00	53469-21-9	Aroclor 1242	ug/kg	1.9	UJ		5
LWG0104R004TSSPWBC00	53469-21-9	Aroclor 1242	ug/kg	1.9	UJ		5
LWG0105R001TSSPWBC00	53469-21-9	Aroclor 1242	ug/kg	1.9	UJ		5
LWG0105R020TSSPWBC00	53469-21-9	Aroclor 1242	ug/kg	1.9	UJ		5
LWG0106R001TSSPWBC00	53469-21-9	Aroclor 1242	ug/kg	16	UJ		5
LWG0106R002TSSPWBC10	53469-21-9	Aroclor 1242	ug/kg	50	UJ		5
LWG0106R004TSSPWBC00	53469-21-9	Aroclor 1242	ug/kg	92	UJ		5
LWG0107R009TSSBWBC30	53469-21-9	Aroclor 1242	ug/kg	38	UJ		5
LWG0108R003TSSPWBC00	53469-21-9	Aroclor 1242	ug/kg	38	UJ		5
LWG0108R010TSSBWBC10	53469-21-9	Aroclor 1242	ug/kg	190	UJ		5
LWG0108R010TSSBWBC20	53469-21-9	Aroclor 1242	ug/kg	190	UJ		5
LWG0108R032TSSBWBC00	53469-21-9	Aroclor 1242	ug/kg	38	UJ		5
LWG0109R001TSSPWBC00	53469-21-9	Aroclor 1242	ug/kg	47	UJ		5
LWG0109R006TSSBWBC00	53469-21-9	Aroclor 1242	ug/kg	38	UJ		5
LWG01FZ0306TSCPWBC20	53469-21-9	Aroclor 1242	ug/kg	630	UJ		5
LWG01FZ0609TSBBFLC20	53469-21-9	Aroclor 1242	ug/kg	40	UJ		5
LWG01FZ0609TSCPFLC10	53469-21-9	Aroclor 1242	ug/kg	57	UJ		5
LWG01FZ0609TSCPFLC30	53469-21-9	Aroclor 1242	ug/kg	33	UJ		5
LWG0102R001TSSPWBC00	12672-29-6	Aroclor 1248	ug/kg	1900	J		5
LWG0103R001TSSPWBC00	12672-29-6	Aroclor 1248	ug/kg	81	J		5
LWG0103R002TSSPWBC10	12672-29-6	Aroclor 1248	ug/kg	54	J		5
LWG0103R002TSSPWBC20	12672-29-6	Aroclor 1248	ug/kg	86	J		5
LWG0103R014TSLSWBC10	12672-29-6	Aroclor 1248	ug/kg	1400	J		5
LWG0104R002TSSPWBC00	12672-29-6	Aroclor 1248	ug/kg	36	J		5
LWG0104R003TSSPWBC00	12672-29-6	Aroclor 1248	ug/kg	100	J		5
LWG0104R004TSSPWBC00	12672-29-6	Aroclor 1248	ug/kg	49	J		5
LWG0105R001TSSPWBC00	12672-29-6	Aroclor 1248	ug/kg	130	J		5
LWG0105R020TSSPWBC00	12672-29-6	Aroclor 1248	ug/kg	59	J		5
LWG0106R001TSSPWBC00	12672-29-6	Aroclor 1248	ug/kg	37	UJ		5
LWG0106R002TSSPWBC10	12672-29-6	Aroclor 1248	ug/kg	87	UJ		5
LWG0106R004TSSPWBC00	12672-29-6	Aroclor 1248	ug/kg	190	UJ		5
LWG0107R009TSSBWBC30	12672-29-6	Aroclor 1248	ug/kg	410	J	P	5
LWG0108R003TSSPWBC00	12672-29-6	Aroclor 1248	ug/kg	130	UJ		5
LWG0108R010TSSBWBC10	12672-29-6	Aroclor 1248	ug/kg	520	UJ		5
LWG0108R010TSSBWBC20	12672-29-6	Aroclor 1248	ug/kg	240	UJ		5
LWG0108R032TSSBWBC00	12672-29-6	Aroclor 1248	ug/kg	220	J		5
LWG0109R001TSSPWBC00	12672-29-6	Aroclor 1248	ug/kg	190	UJ		5
LWG0109R006TSSBWBC00	12672-29-6	Aroclor 1248	ug/kg	340	J		5
LWG01FZ0306TSCPWBC20	12672-29-6	Aroclor 1248	ug/kg	730	UJ		5

Table E-23. Qualified Data for PCB Aroclors in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG01FZ0609TSBBFLC20	12672-29-6	Aroclor 1248	ug/kg	71	UJ		5
LWG01FZ0609TSCPFLC10	12672-29-6	Aroclor 1248	ug/kg	180	UJ		5
LWG01FZ0609TSCPFLC30	12672-29-6	Aroclor 1248	ug/kg	190	UJ		5
LWG0102R001TSSPWBC00	11097-69-1	Aroclor 1254	ug/kg	1400	UJ		5
LWG0103R001TSSPWBC00	11097-69-1	Aroclor 1254	ug/kg	66	UJ		5
LWG0103R002TSSPWBC10	11097-69-1	Aroclor 1254	ug/kg	67	UJ		5
LWG0103R002TSSPWBC20	11097-69-1	Aroclor 1254	ug/kg	78	UJ		5
LWG0103R014TSLSWBC10	11097-69-1	Aroclor 1254	ug/kg	1500	UJ		5
LWG0104R002TSSPWBC00	11097-69-1	Aroclor 1254	ug/kg	59	UJ		5
LWG0104R003TSSPWBC00	11097-69-1	Aroclor 1254	ug/kg	81	UJ		5
LWG0104R004TSSPWBC00	11097-69-1	Aroclor 1254	ug/kg	67	UJ		5
LWG0105R001TSSPWBC00	11097-69-1	Aroclor 1254	ug/kg	98	UJ		5
LWG0105R020TSSPWBC00	11097-69-1	Aroclor 1254	ug/kg	76	UJ		5
LWG0106R001TSSPWBC00	11097-69-1	Aroclor 1254	ug/kg	50	UJ		5
LWG0106R002TSSPWBC10	11097-69-1	Aroclor 1254	ug/kg	190	UJ		5
LWG0106R004TSSPWBC00	11097-69-1	Aroclor 1254	ug/kg	370	UJ		5
LWG0107R009TSSBWBC30	11097-69-1	Aroclor 1254	ug/kg	390	UJ		5
LWG0108R003TSSPWBC00	11097-69-1	Aroclor 1254	ug/kg	210	UJ		5
LWG0108R010TSSBWBC10	11097-69-1	Aroclor 1254	ug/kg	2200	UJ		5
LWG0108R010TSSBWBC20	11097-69-1	Aroclor 1254	ug/kg	1300	UJ		5
LWG0108R032TSSBWBC00	11097-69-1	Aroclor 1254	ug/kg	480	UJ		5
LWG0109R001TSSPWBC00	11097-69-1	Aroclor 1254	ug/kg	170	UJ		5
LWG0109R006TSSBWBC00	11097-69-1	Aroclor 1254	ug/kg	620	UJ		5
LWG01FZ0306TSCPWBC20	11097-69-1	Aroclor 1254	ug/kg	5200	UJ		5
LWG01FZ0609TSBBFLC20	11097-69-1	Aroclor 1254	ug/kg	390	UJ		5
LWG01FZ0609TSCPFLC10	11097-69-1	Aroclor 1254	ug/kg	520	UJ		5
LWG01FZ0609TSCPFLC30	11097-69-1	Aroclor 1254	ug/kg	690	UJ		5
LWG0102R001TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	430	J		5
LWG0103R001TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	63	J		5
LWG0103R002TSSPWBC10	11096-82-5	Aroclor 1260	ug/kg	67	J		5
LWG0103R002TSSPWBC20	11096-82-5	Aroclor 1260	ug/kg	84	J		5
LWG0103R014TSLSWBC10	11096-82-5	Aroclor 1260	ug/kg	620	J		5
LWG0104R002TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	120	J		5
LWG0104R003TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	96	J		5
LWG0104R004TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	74	J		5
LWG0105R001TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	66	J		5
LWG0105R020TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	73	J		5
LWG0106R001TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	62	J		5
LWG0106R002TSSPWBC10	11096-82-5	Aroclor 1260	ug/kg	600	J		5
LWG0106R004TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	400	J	P	5,23
LWG0107R003TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	180	J	P	23
LWG0107R006TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	140	J	P	23
LWG0107R009TSSBWBC30	11096-82-5	Aroclor 1260	ug/kg	370	J		5
LWG0108R003TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	480	J		5
LWG0108R010TSSBWBC10	11096-82-5	Aroclor 1260	ug/kg	4500	J		5

Table E-23. Qualified Data for PCB Aroclors in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0108R010TSSBWBC20	11096-82-5	Aroclor 1260	ug/kg	3300	J		5
LWG0108R032TSSBWBC00	11096-82-5	Aroclor 1260	ug/kg	660	J		5
LWG0109R001TSSPWBC00	11096-82-5	Aroclor 1260	ug/kg	510	J		5
LWG0109R006TSSBWBC00	11096-82-5	Aroclor 1260	ug/kg	500	J		5
LWG01FZ0306TSCPWBC20	11096-82-5	Aroclor 1260	ug/kg	6500	J		5
LWG01FZ0609TSBBFLC20	11096-82-5	Aroclor 1260	ug/kg	1300	J		5
LWG01FZ0609TSBBWBC30	11096-82-5	Aroclor 1260	ug/kg	250	J	P	23
LWG01FZ0609TSCPFLC10	11096-82-5	Aroclor 1260	ug/kg	1200	J		5
LWG01FZ0609TSCPFLC30	11096-82-5	Aroclor 1260	ug/kg	1200	J		5
LWG0102R001TSSPWBC00	37324-23-5	Aroclor 1262	ug/kg	38	UJ		5
LWG0103R001TSSPWBC00	37324-23-5	Aroclor 1262	ug/kg	1.9	UJ		5
LWG0103R002TSSPWBC10	37324-23-5	Aroclor 1262	ug/kg	1.9	UJ		5
LWG0103R002TSSPWBC20	37324-23-5	Aroclor 1262	ug/kg	1.9	UJ		5
LWG0103R014TSLSWBC10	37324-23-5	Aroclor 1262	ug/kg	38	UJ		5
LWG0104R002TSSPWBC00	37324-23-5	Aroclor 1262	ug/kg	9.5	UJ		5
LWG0104R003TSSPWBC00	37324-23-5	Aroclor 1262	ug/kg	1.9	UJ		5
LWG0104R004TSSPWBC00	37324-23-5	Aroclor 1262	ug/kg	1.9	UJ		5
LWG0105R001TSSPWBC00	37324-23-5	Aroclor 1262	ug/kg	1.9	UJ		5
LWG0105R020TSSPWBC00	37324-23-5	Aroclor 1262	ug/kg	1.9	UJ		5
LWG0106R001TSSPWBC00	37324-23-5	Aroclor 1262	ug/kg	9.5	UJ		5
LWG0106R002TSSPWBC10	37324-23-5	Aroclor 1262	ug/kg	38	UJ		5
LWG0106R004TSSPWBC00	37324-23-5	Aroclor 1262	ug/kg	38	UJ		5
LWG0107R009TSSBWBC30	37324-23-5	Aroclor 1262	ug/kg	38	UJ		5
LWG0108R003TSSPWBC00	37324-23-5	Aroclor 1262	ug/kg	38	UJ		5
LWG0108R010TSSBWBC10	37324-23-5	Aroclor 1262	ug/kg	190	UJ		5
LWG0108R010TSSBWBC20	37324-23-5	Aroclor 1262	ug/kg	190	UJ		5
LWG0108R032TSSBWBC00	37324-23-5	Aroclor 1262	ug/kg	38	UJ		5
LWG0109R001TSSPWBC00	37324-23-5	Aroclor 1262	ug/kg	38	UJ		5
LWG0109R006TSSBWBC00	37324-23-5	Aroclor 1262	ug/kg	38	UJ		5
LWG01FZ0306TSCPWBC20	37324-23-5	Aroclor 1262	ug/kg	190	UJ		5
LWG01FZ0609TSBBFLC20	37324-23-5	Aroclor 1262	ug/kg	38	UJ		5
LWG01FZ0609TSCPFLC10	37324-23-5	Aroclor 1262	ug/kg	37	UJ		5
LWG01FZ0609TSCPFLC30	37324-23-5	Aroclor 1262	ug/kg	19	UJ		5
LWG0102R001TSSPWBC00	11100-14-4	Aroclor 1268	ug/kg	38	UJ		5
LWG0103R001TSSPWBC00	11100-14-4	Aroclor 1268	ug/kg	1.9	UJ		5
LWG0103R002TSSPWBC10	11100-14-4	Aroclor 1268	ug/kg	1.9	UJ		5
LWG0103R002TSSPWBC20	11100-14-4	Aroclor 1268	ug/kg	1.9	UJ		5
LWG0103R014TSLSWBC10	11100-14-4	Aroclor 1268	ug/kg	38	UJ		5
LWG0104R002TSSPWBC00	11100-14-4	Aroclor 1268	ug/kg	9.5	UJ		5
LWG0104R003TSSPWBC00	11100-14-4	Aroclor 1268	ug/kg	1.9	UJ		5
LWG0104R004TSSPWBC00	11100-14-4	Aroclor 1268	ug/kg	1.9	UJ		5
LWG0105R001TSSPWBC00	11100-14-4	Aroclor 1268	ug/kg	1.9	UJ		5
LWG0105R020TSSPWBC00	11100-14-4	Aroclor 1268	ug/kg	1.9	UJ		5
LWG0106R001TSSPWBC00	11100-14-4	Aroclor 1268	ug/kg	9.5	UJ		5
LWG0106R002TSSPWBC10	11100-14-4	Aroclor 1268	ug/kg	38	UJ		5

Table E-23. Qualified Data for PCB Aroclors in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Lab Flag[b,c]	Qualifier Reason Code[b]
LWG0106R004TSSPWBC00	11100-14-4	Aroclor 1268	ug/kg	38	UJ		5
LWG0107R009TSSBWBC30	11100-14-4	Aroclor 1268	ug/kg	38	UJ		5
LWG0108R003TSSPWBC00	11100-14-4	Aroclor 1268	ug/kg	38	UJ		5
LWG0108R010TSSBWBC10	11100-14-4	Aroclor 1268	ug/kg	190	UJ		5
LWG0108R010TSSBWBC20	11100-14-4	Aroclor 1268	ug/kg	190	UJ		5
LWG0108R032TSSBWBC00	11100-14-4	Aroclor 1268	ug/kg	38	UJ		5
LWG0109R001TSSPWBC00	11100-14-4	Aroclor 1268	ug/kg	38	UJ		5
LWG0109R006TSSBWBC00	11100-14-4	Aroclor 1268	ug/kg	38	UJ		5
LWG01FZ0306TSCPWBC20	11100-14-4	Aroclor 1268	ug/kg	190	UJ		5
LWG01FZ0609TSBBFLC20	11100-14-4	Aroclor 1268	ug/kg	38	UJ		5
LWG01FZ0609TSCPFLC10	11100-14-4	Aroclor 1268	ug/kg	37	UJ		5
LWG01FZ0609TSCPFLC30	11100-14-4	Aroclor 1268	ug/kg	19	UJ		5

Notes:

[a] Rejected data are not included in this summary.

[b] Qualifiers, laboratory flags, and data qualifier reason codes are defined in Table X-1.

[c] Laboratory flags are only included when they describe quality control exceedances that resulted in qualification of data.

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0106R002TSSPWBC10	13029-08-8	2,2'-Dichlorobiphenyl	pg/g	749	J	19
LWG0106R024TSSBWBC00	13029-08-8	2,2'-Dichlorobiphenyl	pg/g	87.8	J	19
LWG0107R009TSSBWBC10	13029-08-8	2,2'-Dichlorobiphenyl	pg/g	705	J	19
LWG01FZ0306TSBBWBC10	13029-08-8	2,2'-Dichlorobiphenyl	pg/g	77.6	J	19
LWG01FZ0609TSBBWBC20	13029-08-8	2,2'-Dichlorobiphenyl	pg/g	61.3	J	19
LWG0106R002TSSPWBC10	25569-80-6	2,3'-Dichlorobiphenyl	pg/g	35.3	J	19
LWG0106R024TSSBWBC00	25569-80-6	2,3'-Dichlorobiphenyl	pg/g	11.6	J	19, L
LWG0107R009TSSBWBC10	25569-80-6	2,3'-Dichlorobiphenyl	pg/g	43.7	J	19
LWG01FZ0306TSBBWBC10	25569-80-6	2,3'-Dichlorobiphenyl	pg/g	12.5	J	19, L
LWG01FZ0609TSBBWBC20	25569-80-6	2,3'-Dichlorobiphenyl	pg/g	22.6	J	19
LWG0106R002TSSPWBC10	16605-91-7	2,3-Dichlorobiphenyl	pg/g	1.46	J	19, L
LWG0106R024TSSBWBC00	16605-91-7	2,3-Dichlorobiphenyl	pg/g	1.99	UJ	19
LWG0107R009TSSBWBC10	16605-91-7	2,3-Dichlorobiphenyl	pg/g	2.23	J	19
LWG01FZ0306TSBBWBC10	16605-91-7	2,3-Dichlorobiphenyl	pg/g	2.85	UJ	19
LWG01FZ0609TSBBWBC20	16605-91-7	2,3-Dichlorobiphenyl	pg/g	2.4	UJ	19
LWG0106R002TSSPWBC10	34883-43-7	2,4'-Dichlorobiphenyl	pg/g	139	J	19
LWG0106R024TSSBWBC00	34883-43-7	2,4'-Dichlorobiphenyl	pg/g	50.9	J	19
LWG0107R009TSSBWBC10	34883-43-7	2,4'-Dichlorobiphenyl	pg/g	193	J	19
LWG01FZ0306TSBBWBC10	34883-43-7	2,4'-Dichlorobiphenyl	pg/g	49.5	J	19
LWG01FZ0609TSBBWBC20	34883-43-7	2,4'-Dichlorobiphenyl	pg/g	92.9	J	19
LWG0106R002TSSPWBC10	33284-50-3	2,4-Dichlorobiphenyl	pg/g	5.73	J	19
LWG0106R024TSSBWBC00	33284-50-3	2,4-Dichlorobiphenyl	pg/g	3.16	UJ	19
LWG0107R009TSSBWBC10	33284-50-3	2,4-Dichlorobiphenyl	pg/g	7.93	J	19
LWG01FZ0306TSBBWBC10	33284-50-3	2,4-Dichlorobiphenyl	pg/g	3.8	UJ	19
LWG01FZ0609TSBBWBC20	33284-50-3	2,4-Dichlorobiphenyl	pg/g	3.81	UJ	19
LWG0106R002TSSPWBC10	34883-39-1	2,5-Dichlorobiphenyl	pg/g	9.51	J	19
LWG0106R024TSSBWBC00	34883-39-1	2,5-Dichlorobiphenyl	pg/g	2.63	J	19, L
LWG0107R009TSSBWBC10	34883-39-1	2,5-Dichlorobiphenyl	pg/g	11.8	J	19
LWG01FZ0306TSBBWBC10	34883-39-1	2,5-Dichlorobiphenyl	pg/g	4.96	J	19, L
LWG01FZ0609TSBBWBC20	34883-39-1	2,5-Dichlorobiphenyl	pg/g	7.83	J	19, L
LWG0106R002TSSPWBC10	33146-45-1	2,6-Dichlorobiphenyl	pg/g	73.8	J	19
LWG0106R024TSSBWBC00	33146-45-1	2,6-Dichlorobiphenyl	pg/g	4.02	UJ	19
LWG0107R009TSSBWBC10	33146-45-1	2,6-Dichlorobiphenyl	pg/g	45.5	J	19
LWG01FZ0306TSBBWBC10	33146-45-1	2,6-Dichlorobiphenyl	pg/g	4.84	UJ	19
LWG01FZ0609TSBBWBC20	33146-45-1	2,6-Dichlorobiphenyl	pg/g	4.85	UJ	19
LWG0103R004TSCRWBC00	2051-60-7	2-Chlorobiphenyl	pg/g	2.38	NJ	I-23, L
LWG0107R009TSSBWBC10	2051-60-7	2-Chlorobiphenyl	pg/g	7.93	J	19
LWG0108R010TSSBWBC10	2051-60-7	2-Chlorobiphenyl	pg/g	20.5	J	19, L
LWG01FZ0306TSBBWBC20	2051-60-7	2-Chlorobiphenyl	pg/g	2.52	J	19, L
LWG01FZ0609TSBCWBC10	2051-60-7	2-Chlorobiphenyl	pg/g	6.85	J	19, L
LWG01FZ0609TSBCWBC20	2051-60-7	2-Chlorobiphenyl	pg/g	21.9	J	19
LWG01FZ0609TSCPWBC30	2051-60-7	2-Chlorobiphenyl	pg/g	5.09	J	19, L
LWG0106R002TSSPWBC10	2050-67-1	3,3'-Dichlorobiphenyl	pg/g	173	J	19
LWG0106R024TSSBWBC00	2050-67-1	3,3'-Dichlorobiphenyl	pg/g	93.5	J	19

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0107R009TSSBWBC10	2050-67-1	3,3'-Dichlorobiphenyl	pg/g	275	J	19
LWG01FZ0306TSBBWBC10	2050-67-1	3,3'-Dichlorobiphenyl	pg/g	52.3	J	19
LWG01FZ0609TSBBWBC20	2050-67-1	3,3'-Dichlorobiphenyl	pg/g	28.9	J	19
LWG0106R024TSSBWBC00	34883-41-5	3,5-Dichlorobiphenyl	pg/g	2.62	UJ	19
LWG0107R009TSSBWBC10	34883-41-5	3,5-Dichlorobiphenyl	pg/g	0.628	UJ	19
LWG01FZ0306TSBBWBC10	34883-41-5	3,5-Dichlorobiphenyl	pg/g	3.15	UJ	19
LWG01FZ0609TSBBWBC20	34883-41-5	3,5-Dichlorobiphenyl	pg/g	3.15	UJ	19
LWG0103R004TSCRWBC00	2051-61-8	3-Chlorobiphenyl	pg/g	1.85	UJ	19
LWG0107R009TSSBWBC10	2051-61-8	3-Chlorobiphenyl	pg/g	1.94	J	19, L
LWG0108R010TSSBWBC10	2051-61-8	3-Chlorobiphenyl	pg/g	5.86	J	19, L
LWG01FZ0306TSBBWBC20	2051-61-8	3-Chlorobiphenyl	pg/g	1.75	UJ	19
LWG01FZ0609TSBBWBC30	2051-61-8	3-Chlorobiphenyl	pg/g	1.74	UJ	19
LWG01FZ0609TSBCWBC10	2051-61-8	3-Chlorobiphenyl	pg/g	2.44	J	19, L
LWG01FZ0609TSBCWBC20	2051-61-8	3-Chlorobiphenyl	pg/g	2.48	J	19, L
LWG01FZ0609TSCPWBC30	2051-61-8	3-Chlorobiphenyl	pg/g	2.6	J	19, L
LWG0103R004TSCRWBC00	2051-62-9	4-Chlorobiphenyl	pg/g	4.73	NJ	23, L
LWG0107R009TSSBWBC10	2051-62-9	4-Chlorobiphenyl	pg/g	3.23	J	19
LWG0108R010TSSBWBC10	2051-62-9	4-Chlorobiphenyl	pg/g	15.3	J	19, L
LWG01FZ0609TSBBWBC30	2051-62-9	4-Chlorobiphenyl	pg/g	2.7	J	19, L
LWG01FZ0609TSBCWBC10	2051-62-9	4-Chlorobiphenyl	pg/g	4.66	J	19, L
LWG01FZ0609TSBCWBC20	2051-62-9	4-Chlorobiphenyl	pg/g	8.7	J	19, L
LWG01FZ0609TSCPWBC30	2051-62-9	4-Chlorobiphenyl	pg/g	2.8	J	19, L
LWG0102R001TSSPWBC00	PCB012_013	PCB012 & 013	pg/g	13.1	J	23, L
LWG0103R003TSCRWBC00	PCB012_013	PCB012 & 013	pg/g	6.68	J	23, L
LWG0103R004TSCRWBC00	PCB012_013	PCB012 & 013	pg/g	7.94	J	23, L
LWG0103R004TSSPWBC10	PCB012_013	PCB012 & 013	pg/g	52.1	J	23, L
LWG0103R005TSCRWBC00	PCB012_013	PCB012 & 013	pg/g	7.24	J	23, L
LWG0103R014TSSBWBC00	PCB012_013	PCB012 & 013	pg/g	17.4	J	23, L
LWG0104R023TSSBWBC10	PCB012_013	PCB012 & 013	pg/g	24.3	J	23, L
LWG0104R023TSSBWBC20	PCB012_013	PCB012 & 013	pg/g	14.7	J	23, L
LWG0104R023TSSBWBC30	PCB012_013	PCB012 & 013	pg/g	18.8	J	23, L
LWG0106R002TSSPWBC10	PCB012_013	PCB012 & 013	pg/g	5.16	J	19,23, L
LWG0106R002TSSPWBC20	PCB012_013	PCB012 & 013	pg/g	10.5	J	23, L
LWG0106R024TSSBWBC00	PCB012_013	PCB012 & 013	pg/g	4.46	UJ	19
LWG0106R031TSCRWBC00	PCB012_013	PCB012 & 013	pg/g	30.3	J	23, L
LWG0107R009TSSBWBC10	PCB012_013	PCB012 & 013	pg/g	10.3	J	23
LWG0107R009TSSBWBC20	PCB012_013	PCB012 & 013	pg/g	8.46	J	23, L
LWG0107R009TSSBWBC30	PCB012_013	PCB012 & 013	pg/g	8.55	J	23, L
LWG0108R010TSSBWBC10	PCB012_013	PCB012 & 013	pg/g	12.8	J	23, L
LWG0108R010TSSBWBC30	PCB012_013	PCB012 & 013	pg/g	14.7	J	23, L
LWG0108R032TSSBWBC00	PCB012_013	PCB012 & 013	pg/g	6.92	J	23
LWG0109R002TSSPWBC00	PCB012_013	PCB012 & 013	pg/g	6.54	J	23, L
LWG0109R006TSSBWBC00	PCB012_013	PCB012 & 013	pg/g	6.97	J	23, L
LWG01FZ0306TSBBWBC10	PCB012_013	PCB012 & 013	pg/g	5.37	UJ	19

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG01FZ0306TSCPWBC10	PCB012_013	PCB012 & 013	pg/g	15.7	J	23, L
LWG01FZ0306TSCPWBC20	PCB012_013	PCB012 & 013	pg/g	248	J	23
LWG01FZ0609TSBBWBC20	PCB012_013	PCB012 & 013	pg/g	5.37	UJ	19
LWG01FZ0609TSBCWBC10	PCB012_013	PCB012 & 013	pg/g	16.5	J	23, L
LWG01FZ0609TSBCWBC20	PCB012_013	PCB012 & 013	pg/g	46.2	J	23
LWG01FZ0609TSCPWBC10	PCB012_013	PCB012 & 013	pg/g	7.25	J	23
LWG01FZ0609TSCPWBC30	PCB012_013	PCB012 & 013	pg/g	18.6	J	23, L
LWG0102R001TSCRWBC00	PCB018_030	PCB018 & 030	pg/g	58.2	J	23
LWG0102R001TSSPWBC00	PCB018_030	PCB018 & 030	pg/g	3870	J	23
LWG0103R003TSCRWBC00	PCB018_030	PCB018 & 030	pg/g	87.1	J	23
LWG0103R004TSCRWBC00	PCB018_030	PCB018 & 030	pg/g	363	J	23
LWG0103R004TSSPWBC10	PCB018_030	PCB018 & 030	pg/g	17900	J	23
LWG0103R005TSCRWBC00	PCB018_030	PCB018 & 030	pg/g	144	J	23
LWG0103R005TSSPWBC00	PCB018_030	PCB018 & 030	pg/g	5440	J	23
LWG0103R014TSSBWBC00	PCB018_030	PCB018 & 030	pg/g	1600	J	23
LWG0104R023TSSBWBC10	PCB018_030	PCB018 & 030	pg/g	4930	J	23
LWG0104R023TSSBWBC20	PCB018_030	PCB018 & 030	pg/g	2480	J	23
LWG0104R023TSSBWBC30	PCB018_030	PCB018 & 030	pg/g	2050	J	23
LWG0105R006TSSBWBC00	PCB018_030	PCB018 & 030	pg/g	1330	J	23
LWG0106R002TSSPWBC10	PCB018_030	PCB018 & 030	pg/g	583	J	23
LWG0106R002TSSPWBC20	PCB018_030	PCB018 & 030	pg/g	651	J	23
LWG0106R004TSCRWBC10	PCB018_030	PCB018 & 030	pg/g	25.6	J	23, L
LWG0106R004TSSPWBC00	PCB018_030	PCB018 & 030	pg/g	1020	J	23
LWG0106R024TSSBWBC00	PCB018_030	PCB018 & 030	pg/g	213	J	23
LWG0106R031TSCRWBC00	PCB018_030	PCB018 & 030	pg/g	91.9	J	23
LWG0107R006TSCRWBC00	PCB018_030	PCB018 & 030	pg/g	38.4	J	23, L
LWG0107R006TSSPWBC00	PCB018_030	PCB018 & 030	pg/g	1850	J	23
LWG0107R009TSSBWBC10	PCB018_030	PCB018 & 030	pg/g	1010	J	23
LWG0107R009TSSBWBC20	PCB018_030	PCB018 & 030	pg/g	1000	J	23
LWG0107R009TSSBWBC30	PCB018_030	PCB018 & 030	pg/g	1220	J	23
LWG0108R003TSSPWBC00	PCB018_030	PCB018 & 030	pg/g	467	J	23
LWG0108R010TSSBWBC10	PCB018_030	PCB018 & 030	pg/g	621	J	23
LWG0108R010TSSBWBC20	PCB018_030	PCB018 & 030	pg/g	602	J	23
LWG0108R010TSSBWBC30	PCB018_030	PCB018 & 030	pg/g	880	J	23
LWG0108R032TSSBWBC00	PCB018_030	PCB018 & 030	pg/g	972	J	23
LWG0109R002TSCRWBC00	PCB018_030	PCB018 & 030	pg/g	172	J	23
LWG0109R002TSSPWBC00	PCB018_030	PCB018 & 030	pg/g	2400	J	23
LWG0109R006TSSBWBC00	PCB018_030	PCB018 & 030	pg/g	2480	J	23
LWG01FZ0306TSBBWBC10	PCB018_030	PCB018 & 030	pg/g	223	J	23
LWG01FZ0306TSBBWBC20	PCB018_030	PCB018 & 030	pg/g	533	J	23
LWG01FZ0306TSBBWBC30	PCB018_030	PCB018 & 030	pg/g	792	J	23
LWG01FZ0306TSBCWBC10	PCB018_030	PCB018 & 030	pg/g	363	J	23
LWG01FZ0306TSBCWBC20	PCB018_030	PCB018 & 030	pg/g	451	J	23
LWG01FZ0306TSCPWBC10	PCB018_030	PCB018 & 030	pg/g	1820	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG01FZ0306TSCPWBC20	PCB018_030	PCB018 & 030	pg/g	6750	J	23
LWG01FZ0306TSCPWBC30	PCB018_030	PCB018 & 030	pg/g	547	J	23
LWG01FZ0609TSBBWBC10	PCB018_030	PCB018 & 030	pg/g	368	J	23
LWG01FZ0609TSBBWBC20	PCB018_030	PCB018 & 030	pg/g	491	J	23
LWG01FZ0609TSBBWBC30	PCB018_030	PCB018 & 030	pg/g	709	J	23
LWG01FZ0609TSBCWBC10	PCB018_030	PCB018 & 030	pg/g	202	J	23
LWG01FZ0609TSBCWBC20	PCB018_030	PCB018 & 030	pg/g	412	J	23
LWG01FZ0609TSCPWBC10	PCB018_030	PCB018 & 030	pg/g	1040	J	23
LWG01FZ0609TSCPWBC20	PCB018_030	PCB018 & 030	pg/g	962	J	23
LWG01FZ0609TSCPWBC30	PCB018_030	PCB018 & 030	pg/g	882	J	23
LWG0102R001TSCRWBC00	PCB020_028	PCB020 & 028	pg/g	2250	J	23
LWG0102R001TSSPWBC00	PCB020_028	PCB020 & 028	pg/g	32400	J	23
LWG0103R003TSCRWBC00	PCB020_028	PCB020 & 028	pg/g	963	J	23
LWG0103R004TSCRWBC00	PCB020_028	PCB020 & 028	pg/g	2030	J	23
LWG0103R004TSSPWBC10	PCB020_028	PCB020 & 028	pg/g	51600	J	23
LWG0103R005TSCRWBC00	PCB020_028	PCB020 & 028	pg/g	1300	J	23
LWG0103R005TSSPWBC00	PCB020_028	PCB020 & 028	pg/g	14800	J	23
LWG0103R014TSSBWBC00	PCB020_028	PCB020 & 028	pg/g	10000	J	23
LWG0104R023TSSBWBC10	PCB020_028	PCB020 & 028	pg/g	16900	J	23
LWG0104R023TSSBWBC20	PCB020_028	PCB020 & 028	pg/g	9380	J	23
LWG0104R023TSSBWBC30	PCB020_028	PCB020 & 028	pg/g	9540	J	23
LWG0105R006TSSBWBC00	PCB020_028	PCB020 & 028	pg/g	5080	J	23
LWG0106R002TSSPWBC10	PCB020_028	PCB020 & 028	pg/g	1390	J	23
LWG0106R002TSSPWBC20	PCB020_028	PCB020 & 028	pg/g	1840	J	23
LWG0106R004TSCRWBC10	PCB020_028	PCB020 & 028	pg/g	209	J	23
LWG0106R004TSCRWBC20	PCB020_028	PCB020 & 028	pg/g	25.1	J	23, L
LWG0106R004TSSPWBC00	PCB020_028	PCB020 & 028	pg/g	2720	J	23
LWG0106R024TSSBWBC00	PCB020_028	PCB020 & 028	pg/g	1070	J	23
LWG0106R031TSCRWBC00	PCB020_028	PCB020 & 028	pg/g	181	J	23
LWG0107R006TSCRWBC00	PCB020_028	PCB020 & 028	pg/g	383	J	23
LWG0107R006TSSPWBC00	PCB020_028	PCB020 & 028	pg/g	6110	J	23
LWG0107R009TSSBWBC10	PCB020_028	PCB020 & 028	pg/g	3550	J	23
LWG0107R009TSSBWBC20	PCB020_028	PCB020 & 028	pg/g	2830	J	23
LWG0107R009TSSBWBC30	PCB020_028	PCB020 & 028	pg/g	4770	J	23
LWG0108R003TSCRWBC00	PCB020_028	PCB020 & 028	pg/g	113	J	23
LWG0108R003TSSPWBC00	PCB020_028	PCB020 & 028	pg/g	1420	J	23
LWG0108R010TSSBWBC10	PCB020_028	PCB020 & 028	pg/g	2600	J	23
LWG0108R010TSSBWBC20	PCB020_028	PCB020 & 028	pg/g	2050	J	23
LWG0108R010TSSBWBC30	PCB020_028	PCB020 & 028	pg/g	2860	J	23
LWG0108R032TSSBWBC00	PCB020_028	PCB020 & 028	pg/g	3840	J	23
LWG0109R002TSCRWBC00	PCB020_028	PCB020 & 028	pg/g	601	J	23
LWG0109R002TSSPWBC00	PCB020_028	PCB020 & 028	pg/g	4220	J	23
LWG0109R006TSSBWBC00	PCB020_028	PCB020 & 028	pg/g	9940	J	23
LWG01FZ0306TSBBWBC10	PCB020_028	PCB020 & 028	pg/g	1060	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG01FZ0306TSBBWBC20	PCB020_028	PCB020 & 028	pg/g	2490	J	23
LWG01FZ0306TSBBWBC30	PCB020_028	PCB020 & 028	pg/g	2310	J	23
LWG01FZ0306TSBCWBC10	PCB020_028	PCB020 & 028	pg/g	1750	J	23
LWG01FZ0306TSBCWBC20	PCB020_028	PCB020 & 028	pg/g	1850	J	23
LWG01FZ0306TSCPWBC10	PCB020_028	PCB020 & 028	pg/g	6000	J	23
LWG01FZ0306TSCPWBC20	PCB020_028	PCB020 & 028	pg/g	10700	J	23
LWG01FZ0306TSCPWBC30	PCB020_028	PCB020 & 028	pg/g	1970	J	23
LWG01FZ0609TSBBWBC10	PCB020_028	PCB020 & 028	pg/g	2080	J	23
LWG01FZ0609TSBBWBC20	PCB020_028	PCB020 & 028	pg/g	2360	J	23
LWG01FZ0609TSBBWBC30	PCB020_028	PCB020 & 028	pg/g	4120	J	23
LWG01FZ0609TSBCWBC10	PCB020_028	PCB020 & 028	pg/g	1150	J	23
LWG01FZ0609TSBCWBC20	PCB020_028	PCB020 & 028	pg/g	6090	J	23
LWG01FZ0609TSCPWBC10	PCB020_028	PCB020 & 028	pg/g	2470	J	23
LWG01FZ0609TSCPWBC20	PCB020_028	PCB020 & 028	pg/g	3790	J	23
LWG01FZ0609TSCPWBC30	PCB020_028	PCB020 & 028	pg/g	2590	J	23
LWG0102R001TSCRWBC00	PCB021_033	PCB021 & 033	pg/g	66.2	J	23
LWG0102R001TSSPWBC00	PCB021_033	PCB021 & 033	pg/g	1300	J	23
LWG0103R003TSCRWBC00	PCB021_033	PCB021 & 033	pg/g	30.5	J	23, L
LWG0103R004TSCRWBC00	PCB021_033	PCB021 & 033	pg/g	93.8	J	23
LWG0103R004TSSPWBC10	PCB021_033	PCB021 & 033	pg/g	12500	J	23
LWG0103R005TSCRWBC00	PCB021_033	PCB021 & 033	pg/g	98.2	J	23
LWG0103R005TSSPWBC00	PCB021_033	PCB021 & 033	pg/g	4010	J	23
LWG0103R014TSSBWBC00	PCB021_033	PCB021 & 033	pg/g	1290	J	23
LWG0104R023TSSBWBC10	PCB021_033	PCB021 & 033	pg/g	4320	J	23
LWG0104R023TSSBWBC20	PCB021_033	PCB021 & 033	pg/g	1930	J	23
LWG0104R023TSSBWBC30	PCB021_033	PCB021 & 033	pg/g	1390	J	23
LWG0105R006TSSBWBC00	PCB021_033	PCB021 & 033	pg/g	1020	J	23
LWG0106R002TSSPWBC10	PCB021_033	PCB021 & 033	pg/g	301	J	23
LWG0106R002TSSPWBC20	PCB021_033	PCB021 & 033	pg/g	367	J	23
LWG0106R004TSSPWBC00	PCB021_033	PCB021 & 033	pg/g	493	J	23
LWG0106R024TSSBWBC00	PCB021_033	PCB021 & 033	pg/g	156	J	23
LWG0107R006TSCRWBC00	PCB021_033	PCB021 & 033	pg/g	28.5	J	23, L
LWG0107R006TSSPWBC00	PCB021_033	PCB021 & 033	pg/g	274	J	23
LWG0107R009TSSBWBC10	PCB021_033	PCB021 & 033	pg/g	601	J	23
LWG0107R009TSSBWBC20	PCB021_033	PCB021 & 033	pg/g	511	J	23
LWG0107R009TSSBWBC30	PCB021_033	PCB021 & 033	pg/g	944	J	23
LWG0108R003TSSPWBC00	PCB021_033	PCB021 & 033	pg/g	247	J	23
LWG0108R010TSSBWBC10	PCB021_033	PCB021 & 033	pg/g	425	J	23
LWG0108R010TSSBWBC20	PCB021_033	PCB021 & 033	pg/g	391	J	23
LWG0108R010TSSBWBC30	PCB021_033	PCB021 & 033	pg/g	504	J	23
LWG0108R032TSSBWBC00	PCB021_033	PCB021 & 033	pg/g	690	J	23
LWG0109R002TSCRWBC00	PCB021_033	PCB021 & 033	pg/g	64.5	J	23, L
LWG0109R002TSSPWBC00	PCB021_033	PCB021 & 033	pg/g	1170	J	23
LWG0109R006TSSBWBC00	PCB021_033	PCB021 & 033	pg/g	1910	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG01FZ0306TSBBWBC10	PCB021_033	PCB021 & 033	pg/g	79.4	J	23
LWG01FZ0306TSBBWBC20	PCB021_033	PCB021 & 033	pg/g	182	J	23
LWG01FZ0306TSBBWBC30	PCB021_033	PCB021 & 033	pg/g	454	J	23
LWG01FZ0306TSBCWBC10	PCB021_033	PCB021 & 033	pg/g	365	J	23
LWG01FZ0306TSBCWBC20	PCB021_033	PCB021 & 033	pg/g	488	J	23
LWG01FZ0306TSCPWBC10	PCB021_033	PCB021 & 033	pg/g	1020	J	23
LWG01FZ0306TSCPWBC20	PCB021_033	PCB021 & 033	pg/g	1970	J	23
LWG01FZ0306TSCPWBC30	PCB021_033	PCB021 & 033	pg/g	361	J	23
LWG01FZ0609TSBBWBC10	PCB021_033	PCB021 & 033	pg/g	134	J	23
LWG01FZ0609TSBBWBC20	PCB021_033	PCB021 & 033	pg/g	183	J	23
LWG01FZ0609TSBBWBC30	PCB021_033	PCB021 & 033	pg/g	292	J	23
LWG01FZ0609TSBCWBC10	PCB021_033	PCB021 & 033	pg/g	197	J	23
LWG01FZ0609TSBCWBC20	PCB021_033	PCB021 & 033	pg/g	569	J	23
LWG01FZ0609TSCPWBC10	PCB021_033	PCB021 & 033	pg/g	578	J	23
LWG01FZ0609TSCPWBC20	PCB021_033	PCB021 & 033	pg/g	735	J	23
LWG01FZ0609TSCPWBC30	PCB021_033	PCB021 & 033	pg/g	571	J	23
LWG0102R001TSCRWBC00	PCB026_029	PCB026 & 029	pg/g	61.9	J	23
LWG0102R001TSSPWBC00	PCB026_029	PCB026 & 029	pg/g	1380	J	23
LWG0103R003TSCRWBC00	PCB026_029	PCB026 & 029	pg/g	92.9	J	23
LWG0103R004TSCRWBC00	PCB026_029	PCB026 & 029	pg/g	219	J	23
LWG0103R004TSSPWBC10	PCB026_029	PCB026 & 029	pg/g	6410	J	23
LWG0103R005TSCRWBC00	PCB026_029	PCB026 & 029	pg/g	132	J	23
LWG0103R005TSSPWBC00	PCB026_029	PCB026 & 029	pg/g	2040	J	23
LWG0103R014TSSBWBC00	PCB026_029	PCB026 & 029	pg/g	1060	J	23
LWG0104R023TSSBWBC10	PCB026_029	PCB026 & 029	pg/g	2190	J	23
LWG0104R023TSSBWBC20	PCB026_029	PCB026 & 029	pg/g	1060	J	23
LWG0104R023TSSBWBC30	PCB026_029	PCB026 & 029	pg/g	960	J	23
LWG0105R006TSSBWBC00	PCB026_029	PCB026 & 029	pg/g	609	J	23
LWG0106R002TSSPWBC10	PCB026_029	PCB026 & 029	pg/g	229	J	23
LWG0106R002TSSPWBC20	PCB026_029	PCB026 & 029	pg/g	266	J	23
LWG0106R004TSCRWBC10	PCB026_029	PCB026 & 029	pg/g	29.3	J	23, L
LWG0106R004TSSPWBC00	PCB026_029	PCB026 & 029	pg/g	314	J	23
LWG0106R024TSSBWBC00	PCB026_029	PCB026 & 029	pg/g	139	J	23
LWG0106R031TSCRWBC00	PCB026_029	PCB026 & 029	pg/g	94.7	J	23
LWG0107R006TSCRWBC00	PCB026_029	PCB026 & 029	pg/g	22.4	J	23, L
LWG0107R006TSSPWBC00	PCB026_029	PCB026 & 029	pg/g	200	J	23
LWG0107R009TSSBWBC10	PCB026_029	PCB026 & 029	pg/g	412	J	23
LWG0107R009TSSBWBC20	PCB026_029	PCB026 & 029	pg/g	350	J	23
LWG0107R009TSSBWBC30	PCB026_029	PCB026 & 029	pg/g	5210	J	23
LWG0108R003TSSPWBC00	PCB026_029	PCB026 & 029	pg/g	183	J	23
LWG0108R010TSSBWBC10	PCB026_029	PCB026 & 029	pg/g	362	J	23
LWG0108R010TSSBWBC20	PCB026_029	PCB026 & 029	pg/g	280	J	23
LWG0108R010TSSBWBC30	PCB026_029	PCB026 & 029	pg/g	411	J	23
LWG0108R032TSSBWBC00	PCB026_029	PCB026 & 029	pg/g	461	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0109R002TSCRWBC00	PCB026_029	PCB026 & 029	pg/g	80	J	23
LWG0109R002TSSPWBC00	PCB026_029	PCB026 & 029	pg/g	728	J	23
LWG0109R006TSSBWBC00	PCB026_029	PCB026 & 029	pg/g	1050	J	23
LWG01FZ0306TSBBWBC10	PCB026_029	PCB026 & 029	pg/g	85.9	J	23
LWG01FZ0306TSBBWBC20	PCB026_029	PCB026 & 029	pg/g	157	J	23
LWG01FZ0306TSBBWBC30	PCB026_029	PCB026 & 029	pg/g	253	J	23
LWG01FZ0306TSBCWBC10	PCB026_029	PCB026 & 029	pg/g	252	J	23
LWG01FZ0306TSBCWBC20	PCB026_029	PCB026 & 029	pg/g	258	J	23
LWG01FZ0306TSCPWBC10	PCB026_029	PCB026 & 029	pg/g	935	J	23
LWG01FZ0306TSCPWBC20	PCB026_029	PCB026 & 029	pg/g	5950	J	23
LWG01FZ0306TSCPWBC30	PCB026_029	PCB026 & 029	pg/g	285	J	23
LWG01FZ0609TSBBWBC10	PCB026_029	PCB026 & 029	pg/g	207	J	23
LWG01FZ0609TSBBWBC20	PCB026_029	PCB026 & 029	pg/g	222	J	23
LWG01FZ0609TSBBWBC30	PCB026_029	PCB026 & 029	pg/g	383	J	23
LWG01FZ0609TSBCWBC10	PCB026_029	PCB026 & 029	pg/g	202	J	23
LWG01FZ0609TSBCWBC20	PCB026_029	PCB026 & 029	pg/g	1240	J	23
LWG01FZ0609TSCPWBC10	PCB026_029	PCB026 & 029	pg/g	485	J	23
LWG01FZ0609TSCPWBC20	PCB026_029	PCB026 & 029	pg/g	662	J	23
LWG01FZ0609TSCPWBC30	PCB026_029	PCB026 & 029	pg/g	519	J	23
LWG0102R001TSCRWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	108	J	23
LWG0102R001TSSPWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	35200	J	23
LWG0103R003TSCRWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	12.1	J	23, L
LWG0103R004TSCRWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	81.1	J	23
LWG0103R004TSSPWBC10	PCB040_041_071	PCB040 & 041 & 071	pg/g	15400	J	23
LWG0103R005TSCRWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	60.7	J	23, L
LWG0103R005TSSPWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	5640	J	23
LWG0103R014TSSBWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	11500	J	23
LWG0104R023TSSBWBC10	PCB040_041_071	PCB040 & 041 & 071	pg/g	7540	J	23
LWG0104R023TSSBWBC20	PCB040_041_071	PCB040 & 041 & 071	pg/g	3680	J	23
LWG0104R023TSSBWBC30	PCB040_041_071	PCB040 & 041 & 071	pg/g	6570	J	23
LWG0105R006TSSBWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	2800	J	23
LWG0106R002TSSPWBC10	PCB040_041_071	PCB040 & 041 & 071	pg/g	755	J	23
LWG0106R002TSSPWBC20	PCB040_041_071	PCB040 & 041 & 071	pg/g	1510	J	23
LWG0106R004TSSPWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	1300	J	23
LWG0106R024TSSBWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	896	J	23
LWG0106R031TSCRWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	28.5	J	23, L
LWG0107R006TSCRWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	96.1	J	23, L
LWG0107R006TSSPWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	14600	J	23
LWG0107R009TSSBWBC10	PCB040_041_071	PCB040 & 041 & 071	pg/g	2050	J	23
LWG0107R009TSSBWBC20	PCB040_041_071	PCB040 & 041 & 071	pg/g	2620	J	23
LWG0107R009TSSBWBC30	PCB040_041_071	PCB040 & 041 & 071	pg/g	3400	J	23
LWG0108R003TSSPWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	834	J	23
LWG0108R010TSSBWBC10	PCB040_041_071	PCB040 & 041 & 071	pg/g	2660	J	23
LWG0108R010TSSBWBC20	PCB040_041_071	PCB040 & 041 & 071	pg/g	1410	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0108R010TSSBWBC30	PCB040_041_071	PCB040 & 041 & 071	pg/g	2210	J	23
LWG0108R032TSSBWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	2260	J	23
LWG0109R002TSCRWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	40.4	J	23, L
LWG0109R002TSSPWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	1720	J	23
LWG0109R006TSSBWBC00	PCB040_041_071	PCB040 & 041 & 071	pg/g	4410	J	23
LWG01FZ0306TSBBWBC10	PCB040_041_071	PCB040 & 041 & 071	pg/g	447	J	23
LWG01FZ0306TSBBWBC20	PCB040_041_071	PCB040 & 041 & 071	pg/g	906	J	23
LWG01FZ0306TSBBWBC30	PCB040_041_071	PCB040 & 041 & 071	pg/g	698	J	23
LWG01FZ0306TSBCWBC10	PCB040_041_071	PCB040 & 041 & 071	pg/g	760	J	23
LWG01FZ0306TSBCWBC20	PCB040_041_071	PCB040 & 041 & 071	pg/g	874	J	23
LWG01FZ0306TSCPWBC10	PCB040_041_071	PCB040 & 041 & 071	pg/g	2340	J	23
LWG01FZ0306TSCPWBC20	PCB040_041_071	PCB040 & 041 & 071	pg/g	25000	J	23
LWG01FZ0306TSCPWBC30	PCB040_041_071	PCB040 & 041 & 071	pg/g	1570	J	23
LWG01FZ0609TSBBWBC10	PCB040_041_071	PCB040 & 041 & 071	pg/g	822	J	23
LWG01FZ0609TSBBWBC20	PCB040_041_071	PCB040 & 041 & 071	pg/g	1100	J	23
LWG01FZ0609TSBBWBC30	PCB040_041_071	PCB040 & 041 & 071	pg/g	1640	J	23
LWG01FZ0609TSBCWBC10	PCB040_041_071	PCB040 & 041 & 071	pg/g	716	J	23
LWG01FZ0609TSBCWBC20	PCB040_041_071	PCB040 & 041 & 071	pg/g	2730	J	23
LWG01FZ0609TSCPWBC10	PCB040_041_071	PCB040 & 041 & 071	pg/g	1870	J	23
LWG01FZ0609TSCPWBC20	PCB040_041_071	PCB040 & 041 & 071	pg/g	2150	J	23
LWG01FZ0609TSCPWBC30	PCB040_041_071	PCB040 & 041 & 071	pg/g	3150	J	23
LWG0102R001TSCRWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	425	J	23
LWG0102R001TSSPWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	115000	J	23
LWG0103R003TSCRWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	144	J	23
LWG0103R004TSCRWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	422	J	23
LWG0103R004TSSPWBC10	PCB044_047_065	PCB044 & 047 & 065	pg/g	40600	J	23
LWG0103R005TSCRWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	519	J	23
LWG0103R005TSSPWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	18700	J	23
LWG0103R014TSSBWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	34500	J	23
LWG0104R023TSSBWBC10	PCB044_047_065	PCB044 & 047 & 065	pg/g	21700	J	23
LWG0104R023TSSBWBC20	PCB044_047_065	PCB044 & 047 & 065	pg/g	11000	J	23
LWG0104R023TSSBWBC30	PCB044_047_065	PCB044 & 047 & 065	pg/g	18900	J	23
LWG0105R006TSSBWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	9990	J	23
LWG0106R002TSSPWBC10	PCB044_047_065	PCB044 & 047 & 065	pg/g	10300	J	23
LWG0106R002TSSPWBC20	PCB044_047_065	PCB044 & 047 & 065	pg/g	39800	J	23
LWG0106R004TSCRWBC10	PCB044_047_065	PCB044 & 047 & 065	pg/g	98.2	J	23, L
LWG0106R004TSSPWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	4310	J	23
LWG0106R024TSSBWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	3800	J	23
LWG0106R031TSCRWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	332	J	23
LWG0107R006TSCRWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	286	J	23
LWG0107R006TSSPWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	38600	J	23
LWG0107R009TSSBWBC10	PCB044_047_065	PCB044 & 047 & 065	pg/g	11500	J	23
LWG0107R009TSSBWBC20	PCB044_047_065	PCB044 & 047 & 065	pg/g	11000	J	23
LWG0107R009TSSBWBC30	PCB044_047_065	PCB044 & 047 & 065	pg/g	13700	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0108R003TSCRWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	79.6	J	23, L
LWG0108R003TSSPWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	7970	J	23
LWG0108R010TSSBWBC10	PCB044_047_065	PCB044 & 047 & 065	pg/g	29100	J	23
LWG0108R010TSSBWBC20	PCB044_047_065	PCB044 & 047 & 065	pg/g	9450	J	23
LWG0108R010TSSBWBC30	PCB044_047_065	PCB044 & 047 & 065	pg/g	15400	J	23
LWG0108R032TSSBWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	10600	J	23
LWG0109R002TSCRWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	256	J	23
LWG0109R002TSSPWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	10300	J	23
LWG0109R006TSSBWBC00	PCB044_047_065	PCB044 & 047 & 065	pg/g	17100	J	23
LWG01FZ0306TSBBWBC10	PCB044_047_065	PCB044 & 047 & 065	pg/g	1650	J	23
LWG01FZ0306TSBBWBC20	PCB044_047_065	PCB044 & 047 & 065	pg/g	3540	J	23
LWG01FZ0306TSBBWBC30	PCB044_047_065	PCB044 & 047 & 065	pg/g	2450	J	23
LWG01FZ0306TSBCWBC10	PCB044_047_065	PCB044 & 047 & 065	pg/g	2200	J	23
LWG01FZ0306TSBCWBC20	PCB044_047_065	PCB044 & 047 & 065	pg/g	2520	J	23
LWG01FZ0306TSCPWBC10	PCB044_047_065	PCB044 & 047 & 065	pg/g	9130	J	23
LWG01FZ0306TSCPWBC20	PCB044_047_065	PCB044 & 047 & 065	pg/g	195000	J	23
LWG01FZ0306TSCPWBC30	PCB044_047_065	PCB044 & 047 & 065	pg/g	5220	J	23
LWG01FZ0609TSBBWBC10	PCB044_047_065	PCB044 & 047 & 065	pg/g	7940	J	23
LWG01FZ0609TSBBWBC20	PCB044_047_065	PCB044 & 047 & 065	pg/g	4380	J	23
LWG01FZ0609TSBBWBC30	PCB044_047_065	PCB044 & 047 & 065	pg/g	6660	J	23
LWG01FZ0609TSBCWBC10	PCB044_047_065	PCB044 & 047 & 065	pg/g	3110	J	23
LWG01FZ0609TSBCWBC20	PCB044_047_065	PCB044 & 047 & 065	pg/g	11000	J	23
LWG01FZ0609TSCPWBC10	PCB044_047_065	PCB044 & 047 & 065	pg/g	8980	J	23
LWG01FZ0609TSCPWBC20	PCB044_047_065	PCB044 & 047 & 065	pg/g	8590	J	23
LWG01FZ0609TSCPWBC30	PCB044_047_065	PCB044 & 047 & 065	pg/g	17000	J	23
LWG0102R001TSCRWBC00	PCB045_051	PCB045 & 051	pg/g	43.7	J	23
LWG0102R001TSSPWBC00	PCB045_051	PCB045 & 051	pg/g	5260	J	23
LWG0103R004TSCRWBC00	PCB045_051	PCB045 & 051	pg/g	29.1	J	23, L
LWG0103R004TSSPWBC10	PCB045_051	PCB045 & 051	pg/g	3830	J	23
LWG0103R005TSCRWBC00	PCB045_051	PCB045 & 051	pg/g	24.4	J	23, L
LWG0103R005TSSPWBC00	PCB045_051	PCB045 & 051	pg/g	1480	J	23
LWG0103R014TSSBWBC00	PCB045_051	PCB045 & 051	pg/g	2550	J	23
LWG0104R023TSSBWBC10	PCB045_051	PCB045 & 051	pg/g	2070	J	23
LWG0104R023TSSBWBC20	PCB045_051	PCB045 & 051	pg/g	1020	J	23
LWG0104R023TSSBWBC30	PCB045_051	PCB045 & 051	pg/g	1560	J	23
LWG0105R006TSSBWBC00	PCB045_051	PCB045 & 051	pg/g	894	J	23
LWG0106R002TSSPWBC10	PCB045_051	PCB045 & 051	pg/g	1240	J	23
LWG0106R002TSSPWBC20	PCB045_051	PCB045 & 051	pg/g	2900	J	23
LWG0106R004TSSPWBC00	PCB045_051	PCB045 & 051	pg/g	435	J	23
LWG0106R024TSSBWBC00	PCB045_051	PCB045 & 051	pg/g	273	J	23
LWG0106R031TSCRWBC00	PCB045_051	PCB045 & 051	pg/g	62.9	J	23
LWG0107R006TSCRWBC00	PCB045_051	PCB045 & 051	pg/g	26.3	J	23, L
LWG0107R006TSSPWBC00	PCB045_051	PCB045 & 051	pg/g	2050	J	23
LWG0107R009TSSBWBC10	PCB045_051	PCB045 & 051	pg/g	1300	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0107R009TSSBWBC20	PCB045_051	PCB045 & 051	pg/g	1170	J	23
LWG0107R009TSSBWBC30	PCB045_051	PCB045 & 051	pg/g	1040	J	23
LWG0108R003TSSPWBC00	PCB045_051	PCB045 & 051	pg/g	1110	J	23
LWG0108R010TSSBWBC10	PCB045_051	PCB045 & 051	pg/g	2410	J	23
LWG0108R010TSSBWBC20	PCB045_051	PCB045 & 051	pg/g	1100	J	23
LWG0108R010TSSBWBC30	PCB045_051	PCB045 & 051	pg/g	1440	J	23
LWG0108R032TSSBWBC00	PCB045_051	PCB045 & 051	pg/g	997	J	23
LWG0109R002TSCRWBC00	PCB045_051	PCB045 & 051	pg/g	34.1	J	23, L
LWG0109R002TSSPWBC00	PCB045_051	PCB045 & 051	pg/g	1060	J	23
LWG0109R006TSSBWBC00	PCB045_051	PCB045 & 051	pg/g	1480	J	23
LWG01FZ0306TSBBWBC10	PCB045_051	PCB045 & 051	pg/g	94.7	J	23
LWG01FZ0306TSBBWBC20	PCB045_051	PCB045 & 051	pg/g	226	J	23
LWG01FZ0306TSBBWBC30	PCB045_051	PCB045 & 051	pg/g	205	J	23
LWG01FZ0306TSBCWBC10	PCB045_051	PCB045 & 051	pg/g	295	J	23
LWG01FZ0306TSBCWBC20	PCB045_051	PCB045 & 051	pg/g	396	J	23
LWG01FZ0306TSCPWBC10	PCB045_051	PCB045 & 051	pg/g	1070	J	23
LWG01FZ0306TSCPWBC20	PCB045_051	PCB045 & 051	pg/g	36500	J	23
LWG01FZ0306TSCPWBC30	PCB045_051	PCB045 & 051	pg/g	558	J	23
LWG01FZ0609TSBBWBC10	PCB045_051	PCB045 & 051	pg/g	203	J	23
LWG01FZ0609TSBBWBC20	PCB045_051	PCB045 & 051	pg/g	266	J	23
LWG01FZ0609TSBBWBC30	PCB045_051	PCB045 & 051	pg/g	409	J	23
LWG01FZ0609TSBCWBC10	PCB045_051	PCB045 & 051	pg/g	365	J	23
LWG01FZ0609TSBCWBC20	PCB045_051	PCB045 & 051	pg/g	1140	J	23
LWG01FZ0609TSCPWBC10	PCB045_051	PCB045 & 051	pg/g	1490	J	23
LWG01FZ0609TSCPWBC20	PCB045_051	PCB045 & 051	pg/g	1200	J	23
LWG01FZ0609TSCPWBC30	PCB045_051	PCB045 & 051	pg/g	2970	J	23
LWG0102R001TSCRWBC00	PCB049_069	PCB049 & 069	pg/g	293	J	23
LWG0102R001TSSPWBC00	PCB049_069	PCB049 & 069	pg/g	99300	J	23
LWG0103R003TSCRWBC00	PCB049_069	PCB049 & 069	pg/g	45.6	J	23
LWG0103R004TSCRWBC00	PCB049_069	PCB049 & 069	pg/g	160	J	23
LWG0103R004TSSPWBC10	PCB049_069	PCB049 & 069	pg/g	31000	J	23
LWG0103R005TSCRWBC00	PCB049_069	PCB049 & 069	pg/g	216	J	23
LWG0103R005TSSPWBC00	PCB049_069	PCB049 & 069	pg/g	14800	J	23
LWG0103R014TSSBWBC00	PCB049_069	PCB049 & 069	pg/g	25600	J	23
LWG0104R023TSSBWBC10	PCB049_069	PCB049 & 069	pg/g	16100	J	23
LWG0104R023TSSBWBC20	PCB049_069	PCB049 & 069	pg/g	7870	J	23
LWG0104R023TSSBWBC30	PCB049_069	PCB049 & 069	pg/g	14600	J	23
LWG0105R006TSSBWBC00	PCB049_069	PCB049 & 069	pg/g	7410	J	23
LWG0106R002TSSPWBC10	PCB049_069	PCB049 & 069	pg/g	3100	J	23
LWG0106R002TSSPWBC20	PCB049_069	PCB049 & 069	pg/g	8760	J	23
LWG0106R004TSCRWBC10	PCB049_069	PCB049 & 069	pg/g	29.7	J	23, L
LWG0106R004TSSPWBC00	PCB049_069	PCB049 & 069	pg/g	3060	J	23
LWG0106R024TSSBWBC00	PCB049_069	PCB049 & 069	pg/g	2670	J	23
LWG0106R031TSCRWBC00	PCB049_069	PCB049 & 069	pg/g	81.4	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0107R006TSCRWBC00	PCB049_069	PCB049 & 069	pg/g	142	J	23
LWG0107R006TSSPWBC00	PCB049_069	PCB049 & 069	pg/g	30300	J	23
LWG0107R009TSSBWBC10	PCB049_069	PCB049 & 069	pg/g	6320	J	23
LWG0107R009TSSBWBC20	PCB049_069	PCB049 & 069	pg/g	7200	J	23
LWG0107R009TSSBWBC30	PCB049_069	PCB049 & 069	pg/g	13500	J	23
LWG0108R003TSCRWBC00	PCB049_069	PCB049 & 069	pg/g	26.3	J	23, L
LWG0108R003TSSPWBC00	PCB049_069	PCB049 & 069	pg/g	4480	J	23
LWG0108R010TSSBWBC10	PCB049_069	PCB049 & 069	pg/g	15700	J	23
LWG0108R010TSSBWBC20	PCB049_069	PCB049 & 069	pg/g	5110	J	23
LWG0108R010TSSBWBC30	PCB049_069	PCB049 & 069	pg/g	8190	J	23
LWG0108R032TSSBWBC00	PCB049_069	PCB049 & 069	pg/g	7090	J	23
LWG0109R002TSCRWBC00	PCB049_069	PCB049 & 069	pg/g	99.3	J	23
LWG0109R002TSSPWBC00	PCB049_069	PCB049 & 069	pg/g	7070	J	23
LWG0109R006TSSBWBC00	PCB049_069	PCB049 & 069	pg/g	11500	J	23
LWG01FZ0306TSBBWBC10	PCB049_069	PCB049 & 069	pg/g	790	J	23
LWG01FZ0306TSBBWBC20	PCB049_069	PCB049 & 069	pg/g	1920	J	23
LWG01FZ0306TSBBWBC30	PCB049_069	PCB049 & 069	pg/g	1360	J	23
LWG01FZ0306TSBCWBC10	PCB049_069	PCB049 & 069	pg/g	1420	J	23
LWG01FZ0306TSBCWBC20	PCB049_069	PCB049 & 069	pg/g	1610	J	23
LWG01FZ0306TSCPWBC10	PCB049_069	PCB049 & 069	pg/g	6430	J	23
LWG01FZ0306TSCPWBC20	PCB049_069	PCB049 & 069	pg/g	93600	J	23
LWG01FZ0306TSCPWBC30	PCB049_069	PCB049 & 069	pg/g	3870	J	23
LWG01FZ0609TSBBWBC10	PCB049_069	PCB049 & 069	pg/g	2820	J	23
LWG01FZ0609TSBBWBC20	PCB049_069	PCB049 & 069	pg/g	2300	J	23
LWG01FZ0609TSBBWBC30	PCB049_069	PCB049 & 069	pg/g	3220	J	23
LWG01FZ0609TSBCWBC10	PCB049_069	PCB049 & 069	pg/g	2190	J	23
LWG01FZ0609TSBCWBC20	PCB049_069	PCB049 & 069	pg/g	7390	J	23
LWG01FZ0609TSCPWBC10	PCB049_069	PCB049 & 069	pg/g	5840	J	23
LWG01FZ0609TSCPWBC20	PCB049_069	PCB049 & 069	pg/g	7310	J	23
LWG01FZ0609TSCPWBC30	PCB049_069	PCB049 & 069	pg/g	10600	J	23
LWG0102R001TSCRWBC00	PCB050_053	PCB050 & 053	pg/g	44.4	J	23
LWG0102R001TSSPWBC00	PCB050_053	PCB050 & 053	pg/g	1570	J	23
LWG0103R004TSCRWBC00	PCB050_053	PCB050 & 053	pg/g	27.3	J	23, L
LWG0103R004TSSPWBC10	PCB050_053	PCB050 & 053	pg/g	1870	J	23
LWG0103R005TSCRWBC00	PCB050_053	PCB050 & 053	pg/g	27.2	J	23, L
LWG0103R005TSSPWBC00	PCB050_053	PCB050 & 053	pg/g	753	J	23
LWG0103R014TSSBWBC00	PCB050_053	PCB050 & 053	pg/g	2060	J	23
LWG0104R023TSSBWBC10	PCB050_053	PCB050 & 053	pg/g	1620	J	23
LWG0104R023TSSBWBC20	PCB050_053	PCB050 & 053	pg/g	746	J	23
LWG0104R023TSSBWBC30	PCB050_053	PCB050 & 053	pg/g	1270	J	23
LWG0105R006TSSBWBC00	PCB050_053	PCB050 & 053	pg/g	765	J	23
LWG0106R002TSSPWBC10	PCB050_053	PCB050 & 053	pg/g	623	J	23
LWG0106R002TSSPWBC20	PCB050_053	PCB050 & 053	pg/g	1010	J	23
LWG0106R004TSSPWBC00	PCB050_053	PCB050 & 053	pg/g	247	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0106R024TSSBWBC00	PCB050_053	PCB050 & 053	pg/g	237	J	23
LWG0106R031TSCRWBC00	PCB050_053	PCB050 & 053	pg/g	61.5	J	23
LWG0107R006TSSPWBC00	PCB050_053	PCB050 & 053	pg/g	968	J	23
LWG0107R009TSSBWBC10	PCB050_053	PCB050 & 053	pg/g	1090	J	23
LWG0107R009TSSBWBC20	PCB050_053	PCB050 & 053	pg/g	982	J	23
LWG0107R009TSSBWBC30	PCB050_053	PCB050 & 053	pg/g	935	J	23
LWG0108R003TSSPWBC00	PCB050_053	PCB050 & 053	pg/g	465	J	23
LWG0108R010TSSBWBC10	PCB050_053	PCB050 & 053	pg/g	1700	J	23
LWG0108R010TSSBWBC20	PCB050_053	PCB050 & 053	pg/g	836	J	23
LWG0108R010TSSBWBC30	PCB050_053	PCB050 & 053	pg/g	1120	J	23
LWG0108R032TSSBWBC00	PCB050_053	PCB050 & 053	pg/g	857	J	23
LWG0109R002TSCRWBC00	PCB050_053	PCB050 & 053	pg/g	32.6	J	23, L
LWG0109R002TSSPWBC00	PCB050_053	PCB050 & 053	pg/g	601	J	23
LWG0109R006TSSBWBC00	PCB050_053	PCB050 & 053	pg/g	1220	J	23
LWG01FZ0306TSBBWBC10	PCB050_053	PCB050 & 053	pg/g	43.8	J	23
LWG01FZ0306TSBBWBC20	PCB050_053	PCB050 & 053	pg/g	105	J	23
LWG01FZ0306TSBBWBC30	PCB050_053	PCB050 & 053	pg/g	117	J	23
LWG01FZ0306TSBCWBC10	PCB050_053	PCB050 & 053	pg/g	226	J	23
LWG01FZ0306TSBCWBC20	PCB050_053	PCB050 & 053	pg/g	300	J	23
LWG01FZ0306TSCPWBC10	PCB050_053	PCB050 & 053	pg/g	1080	J	23
LWG01FZ0306TSCPWBC20	PCB050_053	PCB050 & 053	pg/g	104000	J	23
LWG01FZ0306TSCPWBC30	PCB050_053	PCB050 & 053	pg/g	559	J	23
LWG01FZ0609TSBBWBC10	PCB050_053	PCB050 & 053	pg/g	136	J	23
LWG01FZ0609TSBBWBC20	PCB050_053	PCB050 & 053	pg/g	143	J	23
LWG01FZ0609TSBBWBC30	PCB050_053	PCB050 & 053	pg/g	189	J	23
LWG01FZ0609TSBCWBC10	PCB050_053	PCB050 & 053	pg/g	274	J	23
LWG01FZ0609TSBCWBC20	PCB050_053	PCB050 & 053	pg/g	795	J	23
LWG01FZ0609TSCPWBC10	PCB050_053	PCB050 & 053	pg/g	1640	J	23
LWG01FZ0609TSCPWBC20	PCB050_053	PCB050 & 053	pg/g	1600	J	23
LWG01FZ0609TSCPWBC30	PCB050_053	PCB050 & 053	pg/g	5160	J	23
LWG0102R001TSCRWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	28.7	J	23, L
LWG0102R001TSSPWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	8600	J	23
LWG0103R004TSCRWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	31	J	23, L
LWG0103R004TSSPWBC10	PCB059_062_075	PCB059 & 062 & 075	pg/g	3860	J	23
LWG0103R005TSCRWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	30.5	J	23, L
LWG0103R005TSSPWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	1500	J	23
LWG0103R014TSSBWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	2630	J	23
LWG0104R023TSSBWBC10	PCB059_062_075	PCB059 & 062 & 075	pg/g	1790	J	23
LWG0104R023TSSBWBC20	PCB059_062_075	PCB059 & 062 & 075	pg/g	898	J	23
LWG0104R023TSSBWBC30	PCB059_062_075	PCB059 & 062 & 075	pg/g	1490	J	23
LWG0105R006TSSBWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	745	J	23
LWG0106R002TSSPWBC10	PCB059_062_075	PCB059 & 062 & 075	pg/g	383	J	23
LWG0106R002TSSPWBC20	PCB059_062_075	PCB059 & 062 & 075	pg/g	1260	J	23
LWG0106R004TSSPWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	322	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0106R024TSSBWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	286	J	23
LWG0106R031TSCRWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	14.4	J	23, L
LWG0107R006TSSPWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	2810	J	23
LWG0107R009TSSBWBC10	PCB059_062_075	PCB059 & 062 & 075	pg/g	628	J	23
LWG0107R009TSSBWBC20	PCB059_062_075	PCB059 & 062 & 075	pg/g	804	J	23
LWG0107R009TSSBWBC30	PCB059_062_075	PCB059 & 062 & 075	pg/g	913	J	23
LWG0108R003TSSPWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	278	J	23
LWG0108R010TSSBWBC10	PCB059_062_075	PCB059 & 062 & 075	pg/g	634	J	23
LWG0108R010TSSBWBC20	PCB059_062_075	PCB059 & 062 & 075	pg/g	364	J	23
LWG0108R010TSSBWBC30	PCB059_062_075	PCB059 & 062 & 075	pg/g	522	J	23
LWG0108R032TSSBWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	624	J	23
LWG0109R002TSSPWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	381	J	23
LWG0109R006TSSBWBC00	PCB059_062_075	PCB059 & 062 & 075	pg/g	1200	J	23
LWG01FZ0306TSBBWBC10	PCB059_062_075	PCB059 & 062 & 075	pg/g	115	J	23
LWG01FZ0306TSBBWBC20	PCB059_062_075	PCB059 & 062 & 075	pg/g	270	J	23
LWG01FZ0306TSBBWBC30	PCB059_062_075	PCB059 & 062 & 075	pg/g	202	J	23
LWG01FZ0306TSBCWBC10	PCB059_062_075	PCB059 & 062 & 075	pg/g	207	J	23
LWG01FZ0306TSBCWBC20	PCB059_062_075	PCB059 & 062 & 075	pg/g	232	J	23
LWG01FZ0306TSCPWBC10	PCB059_062_075	PCB059 & 062 & 075	pg/g	663	J	23
LWG01FZ0306TSCPWBC20	PCB059_062_075	PCB059 & 062 & 075	pg/g	4840	J	23
LWG01FZ0306TSCPWBC30	PCB059_062_075	PCB059 & 062 & 075	pg/g	425	J	23
LWG01FZ0609TSBBWBC10	PCB059_062_075	PCB059 & 062 & 075	pg/g	286	J	23
LWG01FZ0609TSBBWBC20	PCB059_062_075	PCB059 & 062 & 075	pg/g	267	J	23
LWG01FZ0609TSBBWBC30	PCB059_062_075	PCB059 & 062 & 075	pg/g	470	J	23
LWG01FZ0609TSBCWBC10	PCB059_062_075	PCB059 & 062 & 075	pg/g	232	J	23
LWG01FZ0609TSBCWBC20	PCB059_062_075	PCB059 & 062 & 075	pg/g	816	J	23
LWG01FZ0609TSCPWBC10	PCB059_062_075	PCB059 & 062 & 075	pg/g	421	J	23
LWG01FZ0609TSCPWBC20	PCB059_062_075	PCB059 & 062 & 075	pg/g	601	J	23
LWG01FZ0609TSCPWBC30	PCB059_062_075	PCB059 & 062 & 075	pg/g	745	J	23
LWG0102R001TSCRWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	5360	J	23
LWG0102R001TSSPWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	126000	J	23
LWG0103R003TSCRWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	1440	J	23
LWG0103R004TSCRWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	2010	J	23
LWG0103R004TSSPWBC10	_ _ _	PCB061 & 070 & 074 & 076	pg/g	50700	J	23
LWG0103R005TSCRWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	1870	J	23
LWG0103R005TSSPWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	19100	J	23
LWG0103R014TSSBWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	50400	J	23
LWG0104R023TSSBWBC10	_ _ _	PCB061 & 070 & 074 & 076	pg/g	29200	J	23
LWG0104R023TSSBWBC20	_ _ _	PCB061 & 070 & 074 & 076	pg/g	15700	J	23
LWG0104R023TSSBWBC30	_ _ _	PCB061 & 070 & 074 & 076	pg/g	24000	J	23
LWG0105R006TSSBWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	13800	J	23
LWG0106R002TSSPWBC10	_ _ _	PCB061 & 070 & 074 & 076	pg/g	2560	J	23
LWG0106R002TSSPWBC20	_ _ _	PCB061 & 070 & 074 & 076	pg/g	4130	J	23
LWG0106R004TSCRWBC10	_	PCB061 & 070 & 074 & 076	pg/g	550	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0106R004TSCRWBC20	_ _ _	PCB061 & 070 & 074 & 076	pg/g	108	J	23, L
LWG0106R004TSSPWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	5450	J	23
LWG0106R024TSSBWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	6870	J	23
LWG0106R031TSCRWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	329	J	23
LWG0107R006TSCRWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	1550	J	23
LWG0107R006TSSPWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	33600	J	23
LWG0107R009TSSBWBC10	_ _ _	PCB061 & 070 & 074 & 076	pg/g	9750	J	23
LWG0107R009TSSBWBC20	_ _ _	PCB061 & 070 & 074 & 076	pg/g	11100	J	23
LWG0107R009TSSBWBC30	_ _ _	PCB061 & 070 & 074 & 076	pg/g	12800	J	23
LWG0108R003TSCRWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	346	J	23
LWG0108R003TSSPWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	3910	J	23
LWG0108R010TSSBWBC10	_ _ _	PCB061 & 070 & 074 & 076	pg/g	8420	J	23
LWG0108R010TSSBWBC20	_ _ _	PCB061 & 070 & 074 & 076	pg/g	5650	J	23
LWG0108R010TSSBWBC30	_ _ _	PCB061 & 070 & 074 & 076	pg/g	8310	J	23
LWG0108R032TSSBWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	10900	J	23
LWG0109R002TSCRWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	762	J	23
LWG0109R002TSSPWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	8080	J	23
LWG0109R006TSSBWBC00	_ _ _	PCB061 & 070 & 074 & 076	pg/g	22500	J	23
LWG01FZ0306TSBBWBC10	_ _ _	PCB061 & 070 & 074 & 076	pg/g	1440	J	23
LWG01FZ0306TSBBWBC20	_ _ _	PCB061 & 070 & 074 & 076	pg/g	3080	J	23
LWG01FZ0306TSBBWBC30	_ _ _	PCB061 & 070 & 074 & 076	pg/g	2690	J	23
LWG01FZ0306TSBCWBC10	_ _ _	PCB061 & 070 & 074 & 076	pg/g	3790	J	23
LWG01FZ0306TSBCWBC20	_ _ _	PCB061 & 070 & 074 & 076	pg/g	3630	J	23
LWG01FZ0306TSCPWBC10	_ _ _	PCB061 & 070 & 074 & 076	pg/g	14900	J	23
LWG01FZ0306TSCPWBC20	_ _ _	PCB061 & 070 & 074 & 076	pg/g	25000	J	23
LWG01FZ0306TSCPWBC30	_ _ _	PCB061 & 070 & 074 & 076	pg/g	9060	J	23
LWG01FZ0609TSBBWBC10	_ _ _	PCB061 & 070 & 074 & 076	pg/g	3200	J	23
LWG01FZ0609TSBBWBC20	_ _ _	PCB061 & 070 & 074 & 076	pg/g	4090	J	23
LWG01FZ0609TSBBWBC30	_ _ _	PCB061 & 070 & 074 & 076	pg/g	5580	J	23
LWG01FZ0609TSBCWBC10	_ _ _	PCB061 & 070 & 074 & 076	pg/g	5750	J	23
LWG01FZ0609TSBCWBC20	_ _ _	PCB061 & 070 & 074 & 076	pg/g	20100	J	23
LWG01FZ0609TSCPWBC10	_ _ _	PCB061 & 070 & 074 & 076	pg/g	6750	J	23
LWG01FZ0609TSCPWBC20	_ _ _	PCB061 & 070 & 074 & 076	pg/g	10900	J	23
LWG01FZ0609TSCPWBC30	_	PCB061 & 070 & 074 & 076	pg/g	9860	J	23
LWG0102R001TSCRWBC00	PCB083_099	PCB083 & 099	pg/g	3250	J	23
LWG0102R001TSSPWBC00	PCB083_099	PCB083 & 099	pg/g	114000	J	23
LWG0103R003TSCRWBC00	PCB083_099	PCB083 & 099	pg/g	1340	J	23
LWG0103R004TSCRWBC00	PCB083_099	PCB083 & 099	pg/g	882	J	23
LWG0103R004TSSPWBC10	PCB083_099	PCB083 & 099	pg/g	25500	J	23
LWG0103R005TSCRWBC00	PCB083_099	PCB083 & 099	pg/g	2910	J	23
LWG0103R005TSSPWBC00	PCB083_099	PCB083 & 099	pg/g	28200	J	23
LWG0103R014TSSBWBC00	PCB083_099	PCB083 & 099	pg/g	40400	J	23
LWG0104R023TSSBWBC10	PCB083_099	PCB083 & 099	pg/g	32700	J	23
LWG0104R023TSSBWBC20	PCB083_099	PCB083 & 099	pg/g	15800	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0104R023TSSBWBC30	PCB083_099	PCB083 & 099	pg/g	21300	J	23
LWG0105R006TSSBWBC00	PCB083_099	PCB083 & 099	pg/g	16500	J	23
LWG0106R002TSSPWBC10	PCB083_099	PCB083 & 099	pg/g	8360	J	23
LWG0106R002TSSPWBC20	PCB083_099	PCB083 & 099	pg/g	31600	J	23
LWG0106R004TSCRWBC10	PCB083_099	PCB083 & 099	pg/g	478	J	23
LWG0106R004TSCRWBC20	PCB083_099	PCB083 & 099	pg/g	65.2	J	23, L
LWG0106R004TSSPWBC00	PCB083_099	PCB083 & 099	pg/g	7200	J	23
LWG0106R024TSSBWBC00	PCB083_099	PCB083 & 099	pg/g	9420	J	23
LWG0106R031TSCRWBC00	PCB083_099	PCB083 & 099	pg/g	444	J	23
LWG0107R006TSCRWBC00	PCB083_099	PCB083 & 099	pg/g	607	J	23
LWG0107R006TSSPWBC00	PCB083_099	PCB083 & 099	pg/g	33500	J	23
LWG0107R009TSSBWBC10	PCB083_099	PCB083 & 099	pg/g	17000	J	23
LWG0107R009TSSBWBC20	PCB083_099	PCB083 & 099	pg/g	16800	J	23
LWG0107R009TSSBWBC30	PCB083_099	PCB083 & 099	pg/g	15200	J	23
LWG0108R003TSCRWBC00	PCB083_099	PCB083 & 099	pg/g	519	J	23
LWG0108R003TSSPWBC00	PCB083_099	PCB083 & 099	pg/g	10200	J	23
LWG0108R010TSSBWBC10	PCB083_099	PCB083 & 099	pg/g	72200	J	23
LWG0108R010TSSBWBC20	PCB083_099	PCB083 & 099	pg/g	20000	J	23
LWG0108R010TSSBWBC30	PCB083_099	PCB083 & 099	pg/g	36300	J	23
LWG0108R032TSSBWBC00	PCB083_099	PCB083 & 099	pg/g	19700	J	23
LWG0109R002TSCRWBC00	PCB083_099	PCB083 & 099	pg/g	908	J	23
LWG0109R002TSSPWBC00	PCB083_099	PCB083 & 099	pg/g	26800	J	23
LWG0109R006TSSBWBC00	PCB083_099	PCB083 & 099	pg/g	24500	J	23
LWG01FZ0306TSBBWBC10	PCB083_099	PCB083 & 099	pg/g	2030	J	23
LWG01FZ0306TSBBWBC20	PCB083_099	PCB083 & 099	pg/g	5880	J	23
LWG01FZ0306TSBBWBC30	PCB083_099	PCB083 & 099	pg/g	6560	J	23
LWG01FZ0306TSBCWBC10	PCB083_099	PCB083 & 099	pg/g	3620	J	23
LWG01FZ0306TSBCWBC20	PCB083_099	PCB083 & 099	pg/g	3930	J	23
LWG01FZ0306TSCPWBC10	PCB083_099	PCB083 & 099	pg/g	15700	J	23
LWG01FZ0306TSCPWBC20	PCB083_099	PCB083 & 099	pg/g	60000	J	23
LWG01FZ0306TSCPWBC30	PCB083_099	PCB083 & 099	pg/g	10800	J	23
LWG01FZ0609TSBBWBC10	PCB083_099	PCB083 & 099	pg/g	11000	J	23
LWG01FZ0609TSBBWBC20	PCB083_099	PCB083 & 099	pg/g	4800	J	23
LWG01FZ0609TSBBWBC30	PCB083_099	PCB083 & 099	pg/g	6750	J	23
LWG01FZ0609TSBCWBC10	PCB083_099	PCB083 & 099	pg/g	5680	J	23
LWG01FZ0609TSBCWBC20	PCB083_099	PCB083 & 099	pg/g	11500	J	23
LWG01FZ0609TSCPWBC10	PCB083_099	PCB083 & 099	pg/g	13200	J	23
LWG01FZ0609TSCPWBC20	PCB083_099	PCB083 & 099	pg/g	13400	J	23
LWG01FZ0609TSCPWBC30	PCB083_099	PCB083 & 099	pg/g	18900	J	23
LWG0102R001TSCRWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	513	J	23
LWG0102R001TSSPWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	47200	J	23
LWG0103R003TSCRWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	204	J	23
LWG0103R004TSCRWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	170	J	23
LWG0103R004TSSPWBC10	PCB085_116_117	PCB085 & 116 & 117	pg/g	8330	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0103R005TSCRWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	408	J	23
LWG0103R005TSSPWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	7730	J	23
LWG0103R014TSSBWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	13100	J	23
LWG0104R023TSSBWBC10	PCB085_116_117	PCB085 & 116 & 117	pg/g	9910	J	23
LWG0104R023TSSBWBC20	PCB085_116_117	PCB085 & 116 & 117	pg/g	4910	J	23
LWG0104R023TSSBWBC30	PCB085_116_117	PCB085 & 116 & 117	pg/g	6800	J	23
LWG0105R006TSSBWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	4740	J	23
LWG0106R002TSSPWBC10	PCB085_116_117	PCB085 & 116 & 117	pg/g	1330	J	23
LWG0106R002TSSPWBC20	PCB085_116_117	PCB085 & 116 & 117	pg/g	3380	J	23
LWG0106R004TSCRWBC10	PCB085_116_117	PCB085 & 116 & 117	pg/g	60.9	J	23, L
LWG0106R004TSCRWBC20	PCB085_116_117	PCB085 & 116 & 117	pg/g	39.1	J	23, L
LWG0106R004TSSPWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	2130	J	23
LWG0106R024TSSBWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	2650	J	23
LWG0106R031TSCRWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	51.8	J	23, L
LWG0107R006TSCRWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	142	J	23
LWG0107R006TSSPWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	14000	J	23
LWG0107R009TSSBWBC10	PCB085_116_117	PCB085 & 116 & 117	pg/g	3820	J	23
LWG0107R009TSSBWBC20	PCB085_116_117	PCB085 & 116 & 117	pg/g	4180	J	23
LWG0107R009TSSBWBC30	PCB085_116_117	PCB085 & 116 & 117	pg/g	3580	J	23
LWG0108R003TSCRWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	75.7	J	23, L
LWG0108R003TSSPWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	2280	J	23
LWG0108R010TSSBWBC10	PCB085_116_117	PCB085 & 116 & 117	pg/g	6190	J	23
LWG0108R010TSSBWBC20	PCB085_116_117	PCB085 & 116 & 117	pg/g	2850	J	23
LWG0108R010TSSBWBC30	PCB085_116_117	PCB085 & 116 & 117	pg/g	3860	J	23
LWG0108R032TSSBWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	4660	J	23
LWG0109R002TSCRWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	103	J	23, L
LWG0109R002TSSPWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	6060	J	23
LWG0109R006TSSBWBC00	PCB085_116_117	PCB085 & 116 & 117	pg/g	7180	J	23
LWG01FZ0306TSBBWBC10	PCB085_116_117	PCB085 & 116 & 117	pg/g	663	J	23
LWG01FZ0306TSBBWBC20	PCB085_116_117	PCB085 & 116 & 117	pg/g	1440	J	23
LWG01FZ0306TSBBWBC30	PCB085_116_117	PCB085 & 116 & 117	pg/g	1920	J	23
LWG01FZ0306TSBCWBC10	PCB085_116_117	PCB085 & 116 & 117	pg/g	916	J	23
LWG01FZ0306TSBCWBC20	PCB085_116_117	PCB085 & 116 & 117	pg/g	1030	J	23
LWG01FZ0306TSCPWBC10	PCB085_116_117	PCB085 & 116 & 117	pg/g	4270	J	23
LWG01FZ0306TSCPWBC20	PCB085_116_117	PCB085 & 116 & 117	pg/g	9320	J	23
LWG01FZ0306TSCPWBC30	PCB085_116_117	PCB085 & 116 & 117	pg/g	2380	J	23
LWG01FZ0609TSBBWBC10	PCB085_116_117	PCB085 & 116 & 117	pg/g	1350	J	23
LWG01FZ0609TSBBWBC20	PCB085_116_117	PCB085 & 116 & 117	pg/g	935	J	23
LWG01FZ0609TSBBWBC30	PCB085_116_117	PCB085 & 116 & 117	pg/g	1730	J	23
LWG01FZ0609TSBCWBC10	PCB085_116_117	PCB085 & 116 & 117	pg/g	1210	J	23
LWG01FZ0609TSBCWBC20	PCB085_116_117	PCB085 & 116 & 117	pg/g	2690	J	23
LWG01FZ0609TSCPWBC10	PCB085_116_117	PCB085 & 116 & 117	pg/g	2210	J	23
LWG01FZ0609TSCPWBC20	PCB085_116_117	PCB085 & 116 & 117	pg/g	2620	J	23
LWG01FZ0609TSCPWBC30	PCB085_116_117	PCB085 & 116 & 117	pg/g	2850	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0102R001TSCRWBC00	_ _ _	& 119 & 125	pg/g	447	J	23
LWG0102R001TSSPWBC00	_ _ _	& 119 & 125	pg/g	51300	J	23
LWG0103R003TSCRWBC00	_ _ _	& 119 & 125	pg/g	263	J	23
LWG0103R004TSCRWBC00	_ _ _	& 119 & 125	pg/g	260	J	23
LWG0103R004TSSPWBC10	_ _ _	& 119 & 125	pg/g	13200	J	23
LWG0103R005TSCRWBC00	_ _ _	& 119 & 125	pg/g	852	J	23
LWG0103R005TSSPWBC00	_ _ _	& 119 & 125	pg/g	13600	J	23
LWG0103R014TSSBWBC00	_ _ _	& 119 & 125	pg/g	27500	J	23
LWG0104R023TSSBWBC10	_ _ _	& 119 & 125	pg/g	21100	J	23
LWG0104R023TSSBWBC20	_ _ _	& 119 & 125	pg/g	9570	J	23
LWG0104R023TSSBWBC30	_ _ _	& 119 & 125	pg/g	15100	J	23
LWG0105R006TSSBWBC00	_ _ _	& 119 & 125	pg/g	11200	J	23
LWG0106R002TSSPWBC10	_ _ _	& 119 & 125	pg/g	2580	J	23
LWG0106R002TSSPWBC20	_ _ _	& 119 & 125	pg/g	9370	J	23
LWG0106R004TSCRWBC10	_ _ _	& 119 & 125	pg/g	120	J	23, L
LWG0106R004TSSPWBC00	_ _ _	& 119 & 125	pg/g	2800	J	23
LWG0106R024TSSBWBC00	_ _ _	& 119 & 125	pg/g	6400	J	23
LWG0106R031TSCRWBC00	_ _ _	& 119 & 125	pg/g	81.7	J	23, L
LWG0107R006TSCRWBC00	_ _ _	& 119 & 125	pg/g	176	J	23, L
LWG0107R006TSSPWBC00	_ _ _	& 119 & 125	pg/g	18500	J	23
LWG0107R009TSSBWBC10	_ _ _	& 119 & 125	pg/g	7270	J	23
LWG0107R009TSSBWBC20	_ _ _	& 119 & 125	pg/g	8890	J	23
LWG0107R009TSSBWBC30	_ _ _	& 119 & 125	pg/g	8310	J	23
LWG0108R003TSCRWBC00	_ _ _	& 119 & 125	pg/g	75.3	J	23, L
LWG0108R003TSSPWBC00	_ _ _	& 119 & 125	pg/g	3460	J	23
LWG0108R010TSSBWBC10	_ _ _	& 119 & 125	pg/g	29300	J	23
LWG0108R010TSSBWBC20	_ _ _	& 119 & 125	pg/g	8840	J	23
LWG0108R010TSSBWBC30	_ _ _	& 119 & 125	pg/g	18200	J	23
LWG0108R032TSSBWBC00	_ _ _	& 119 & 125	pg/g	8910	J	23
LWG0109R002TSCRWBC00	_ _ _	& 119 & 125	pg/g	139	J	23, L
LWG0109R002TSSPWBC00	_ _ _	& 119 & 125	pg/g	12500	J	23
LWG0109R006TSSBWBC00	_ _ _	& 119 & 125	pg/g	14900	J	23
LWG01FZ0306TSBBWBC10	_ _ _	& 119 & 125	pg/g	1650	J	23
LWG01FZ0306TSBBWBC20	_ _ _	& 119 & 125	pg/g	3600	J	23
LWG01FZ0306TSBBWBC30	_ _ _	& 119 & 125	pg/g	2560	J	23
LWG01FZ0306TSBCWBC10	_ _ _	& 119 & 125	pg/g	2090	J	23
LWG01FZ0306TSBCWBC20	_ _ _	& 119 & 125	pg/g	2470	J	23
LWG01FZ0306TSCPWBC10	_ _ _	& 119 & 125	pg/g	13600	J	23
LWG01FZ0306TSCPWBC20	_ _ _	& 119 & 125	pg/g	65700	J	23
LWG01FZ0306TSCPWBC30	_ _ _	& 119 & 125	pg/g	7380	J	23
LWG01FZ0609TSBBWBC10	_ _ _	& 119 & 125	pg/g	5390	J	23
LWG01FZ0609TSBBWBC20	_ _ _	& 119 & 125	pg/g	3940	J	23
LWG01FZ0609TSBBWBC30	_ _ _	& 119 & 125	pg/g	4310	J	23
LWG01FZ0609TSBCWBC10	_	& 119 & 125	pg/g	3480	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG01FZ0609TSBCWBC20	_ _ _	& 119 & 125	pg/g	6990	J	23
LWG01FZ0609TSCPWBC10	_ _ _	& 119 & 125	pg/g	8320	J	23
LWG01FZ0609TSCPWBC20	_ _ _	& 119 & 125	pg/g	10300	J	23
LWG01FZ0609TSCPWBC30	_	& 119 & 125	pg/g	13100	J	23
LWG0102R001TSCRWBC00	PCB088_091	PCB088 & 091	pg/g	41.4	J	23, L
LWG0102R001TSSPWBC00	PCB088_091	PCB088 & 091	pg/g	7290	J	23
LWG0103R003TSCRWBC00	PCB088_091	PCB088 & 091	pg/g	10.9	J	23, L
LWG0103R004TSCRWBC00	PCB088_091	PCB088 & 091	pg/g	26.2	J	23, L
LWG0103R004TSSPWBC10	PCB088_091	PCB088 & 091	pg/g	2140	J	23
LWG0103R005TSCRWBC00	PCB088_091	PCB088 & 091	pg/g	93.4	J	23
LWG0103R005TSSPWBC00	PCB088_091	PCB088 & 091	pg/g	2370	J	23
LWG0103R014TSSBWBC00	PCB088_091	PCB088 & 091	pg/g	5790	J	23
LWG0104R023TSSBWBC10	PCB088_091	PCB088 & 091	pg/g	3750	J	23
LWG0104R023TSSBWBC20	PCB088_091	PCB088 & 091	pg/g	1740	J	23
LWG0104R023TSSBWBC30	PCB088_091	PCB088 & 091	pg/g	2890	J	23
LWG0105R006TSSBWBC00	PCB088_091	PCB088 & 091	pg/g	2190	J	23
LWG0106R002TSSPWBC10	PCB088_091	PCB088 & 091	pg/g	736	J	23
LWG0106R002TSSPWBC20	PCB088_091	PCB088 & 091	pg/g	1830	J	23
LWG0106R004TSSPWBC00	PCB088_091	PCB088 & 091	pg/g	470	J	23
LWG0106R024TSSBWBC00	PCB088_091	PCB088 & 091	pg/g	1420	J	23
LWG0106R031TSCRWBC00	PCB088_091	PCB088 & 091	pg/g	23.7	J	23, L
LWG0107R006TSCRWBC00	PCB088_091	PCB088 & 091	pg/g	27.4	J	23, L
LWG0107R006TSSPWBC00	PCB088_091	PCB088 & 091	pg/g	2720	J	23
LWG0107R009TSSBWBC10	PCB088_091	PCB088 & 091	pg/g	1650	J	23
LWG0107R009TSSBWBC20	PCB088_091	PCB088 & 091	pg/g	1850	J	23
LWG0107R009TSSBWBC30	PCB088_091	PCB088 & 091	pg/g	2320	J	23
LWG0108R003TSSPWBC00	PCB088_091	PCB088 & 091	pg/g	728	J	23
LWG0108R010TSSBWBC10	PCB088_091	PCB088 & 091	pg/g	10700	J	23
LWG0108R010TSSBWBC20	PCB088_091	PCB088 & 091	pg/g	2640	J	23
LWG0108R010TSSBWBC30	PCB088_091	PCB088 & 091	pg/g	4370	J	23
LWG0108R032TSSBWBC00	PCB088_091	PCB088 & 091	pg/g	2270	J	23
LWG0109R002TSCRWBC00	PCB088_091	PCB088 & 091	pg/g	32.1	J	23, L
LWG0109R002TSSPWBC00	PCB088_091	PCB088 & 091	pg/g	2390	J	23
LWG0109R006TSSBWBC00	PCB088_091	PCB088 & 091	pg/g	3050	J	23
LWG01FZ0306TSBBWBC10	PCB088_091	PCB088 & 091	pg/g	251	J	23
LWG01FZ0306TSBBWBC20	PCB088_091	PCB088 & 091	pg/g	660	J	23
LWG01FZ0306TSBBWBC30	PCB088_091	PCB088 & 091	pg/g	451	J	23
LWG01FZ0306TSBCWBC10	PCB088_091	PCB088 & 091	pg/g	395	J	23
LWG01FZ0306TSBCWBC20	PCB088_091	PCB088 & 091	pg/g	552	J	23
LWG01FZ0306TSCPWBC10	PCB088_091	PCB088 & 091	pg/g	2920	J	23
LWG01FZ0306TSCPWBC20	PCB088_091	PCB088 & 091	pg/g	39100	J	23
LWG01FZ0306TSCPWBC30	PCB088_091	PCB088 & 091	pg/g	1690	J	23
LWG01FZ0609TSBBWBC10	PCB088_091	PCB088 & 091	pg/g	930	J	23
LWG01FZ0609TSBBWBC20	PCB088_091	PCB088 & 091	pg/g	995	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG01FZ0609TSBBWBC30	PCB088_091	PCB088 & 091	pg/g	918	J	23
LWG01FZ0609TSBCWBC10	PCB088_091	PCB088 & 091	pg/g	669	J	23
LWG01FZ0609TSBCWBC20	PCB088_091	PCB088 & 091	pg/g	1530	J	23
LWG01FZ0609TSCPWBC10	PCB088_091	PCB088 & 091	pg/g	3510	J	23
LWG01FZ0609TSCPWBC20	PCB088_091	PCB088 & 091	pg/g	3150	J	23
LWG01FZ0609TSCPWBC30	PCB088_091	PCB088 & 091	pg/g	5540	J	23
LWG0102R001TSCRWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	634	J	23
LWG0102R001TSSPWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	94900	J	23
LWG0103R003TSCRWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	482	J	23
LWG0103R004TSCRWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	388	J	23
LWG0103R004TSSPWBC10	PCB090_101_113	PCB090 & 101 & 113	pg/g	25900	J	23
LWG0103R005TSCRWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	1710	J	23
LWG0103R005TSSPWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	35400	J	23
LWG0103R014TSSBWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	48300	J	23
LWG0104R023TSSBWBC10	PCB090_101_113	PCB090 & 101 & 113	pg/g	42500	J	23
LWG0104R023TSSBWBC20	PCB090_101_113	PCB090 & 101 & 113	pg/g	19300	J	23
LWG0104R023TSSBWBC30	PCB090_101_113	PCB090 & 101 & 113	pg/g	26800	J	23
LWG0105R006TSSBWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	20500	J	23
LWG0106R002TSSPWBC10	PCB090_101_113	PCB090 & 101 & 113	pg/g	9790	J	23
LWG0106R002TSSPWBC20	PCB090_101_113	PCB090 & 101 & 113	pg/g	45600	J	23
LWG0106R004TSCRWBC10	PCB090_101_113	PCB090 & 101 & 113	pg/g	313	J	23
LWG0106R004TSCRWBC20	PCB090_101_113	PCB090 & 101 & 113	pg/g	83.7	J	23, L
LWG0106R004TSSPWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	6700	J	23
LWG0106R024TSSBWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	12800	J	23
LWG0106R031TSCRWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	291	J	23
LWG0107R006TSCRWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	271	J	23
LWG0107R006TSSPWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	29900	J	23
LWG0107R009TSSBWBC10	PCB090_101_113	PCB090 & 101 & 113	pg/g	17500	J	23
LWG0107R009TSSBWBC20	PCB090_101_113	PCB090 & 101 & 113	pg/g	20000	J	23
LWG0107R009TSSBWBC30	PCB090_101_113	PCB090 & 101 & 113	pg/g	18500	J	23
LWG0108R003TSCRWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	369	J	23
LWG0108R003TSSPWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	10700	J	23
LWG0108R010TSSBWBC10	PCB090_101_113	PCB090 & 101 & 113	pg/g	147000	J	23
LWG0108R010TSSBWBC20	PCB090_101_113	PCB090 & 101 & 113	pg/g	32500	J	23
LWG0108R010TSSBWBC30	PCB090_101_113	PCB090 & 101 & 113	pg/g	100000	J	23
LWG0108R032TSSBWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	22300	J	23
LWG0109R002TSCRWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	731	J	23
LWG0109R002TSSPWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	32500	J	23
LWG0109R006TSSBWBC00	PCB090_101_113	PCB090 & 101 & 113	pg/g	29800	J	23
LWG01FZ0306TSBBWBC10	PCB090_101_113	PCB090 & 101 & 113	pg/g	2150	J	23
LWG01FZ0306TSBBWBC20	PCB090_101_113	PCB090 & 101 & 113	pg/g	5910	J	23
LWG01FZ0306TSBBWBC30	PCB090_101_113	PCB090 & 101 & 113	pg/g	5690	J	23
LWG01FZ0306TSBCWBC10	PCB090_101_113	PCB090 & 101 & 113	pg/g	4220	J	23
LWG01FZ0306TSBCWBC20	PCB090_101_113	PCB090 & 101 & 113	pg/g	4850	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG01FZ0306TSCPWBC10	PCB090_101_113	PCB090 & 101 & 113	pg/g	24700	J	23
LWG01FZ0306TSCPWBC20	PCB090_101_113	PCB090 & 101 & 113	pg/g	244000	J	23
LWG01FZ0306TSCPWBC30	PCB090_101_113	PCB090 & 101 & 113	pg/g	16800	J	23
LWG01FZ0609TSBBWBC10	PCB090_101_113	PCB090 & 101 & 113	pg/g	34900	J	23
LWG01FZ0609TSBBWBC20	PCB090_101_113	PCB090 & 101 & 113	pg/g	8580	J	23
LWG01FZ0609TSBBWBC30	PCB090_101_113	PCB090 & 101 & 113	pg/g	7980	J	23
LWG01FZ0609TSBCWBC10	PCB090_101_113	PCB090 & 101 & 113	pg/g	7470	J	23
LWG01FZ0609TSBCWBC20	PCB090_101_113	PCB090 & 101 & 113	pg/g	14500	J	23
LWG01FZ0609TSCPWBC10	PCB090_101_113	PCB090 & 101 & 113	pg/g	22100	J	23
LWG01FZ0609TSCPWBC20	PCB090_101_113	PCB090 & 101 & 113	pg/g	24900	J	23
LWG01FZ0609TSCPWBC30	PCB090_101_113	PCB090 & 101 & 113	pg/g	47300	J	23
LWG0102R001TSCRWBC00	_ _ _	& 102	pg/g	192	J	23
LWG0102R001TSSPWBC00	_ _ _	& 102	pg/g	36300	J	23
LWG0103R003TSCRWBC00	_ _ _	& 102	pg/g	183	J	23
LWG0103R004TSCRWBC00	_ _ _	& 102	pg/g	236	J	23
LWG0103R004TSSPWBC10	_ _ _	& 102	pg/g	11200	J	23
LWG0103R005TSCRWBC00	_ _ _	& 102	pg/g	924	J	23
LWG0103R005TSSPWBC00	_ _ _	& 102	pg/g	15100	J	23
LWG0103R014TSSBWBC00	_ _ _	& 102	pg/g	22900	J	23
LWG0104R023TSSBWBC10	_ _ _	& 102	pg/g	19100	J	23
LWG0104R023TSSBWBC20	_ _ _	& 102	pg/g	8100	J	23
LWG0104R023TSSBWBC30	_ _ _	& 102	pg/g	11500	J	23
LWG0105R006TSSBWBC00	_ _ _	& 102	pg/g	10000	J	23
LWG0106R002TSSPWBC10	_ _ _	& 102	pg/g	5050	J	23
LWG0106R002TSSPWBC20	_ _ _	& 102	pg/g	21500	J	23
LWG0106R004TSCRWBC10	_ _ _	& 102	pg/g	142	J	23, L
LWG0106R004TSSPWBC00	_ _ _	& 102	pg/g	2510	J	23
LWG0106R024TSSBWBC00	_ _ _	& 102	pg/g	5930	J	23
LWG0106R031TSCRWBC00	_ _ _	& 102	pg/g	147	J	23
LWG0107R006TSCRWBC00	_ _ _	& 102	pg/g	106	J	23, L
LWG0107R006TSSPWBC00	_ _ _	& 102	pg/g	10900	J	23
LWG0107R009TSSBWBC10	_ _ _	& 102	pg/g	9190	J	23
LWG0107R009TSSBWBC20	_ _ _	& 102	pg/g	8320	J	23
LWG0107R009TSSBWBC30	_ _ _	& 102	pg/g	11800	J	23
LWG0108R003TSCRWBC00	_ _ _	& 102	pg/g	101	J	23, L
LWG0108R003TSSPWBC00	_ _ _	& 102	pg/g	5420	J	23
LWG0108R010TSSBWBC10	_ _ _	& 102	pg/g	53500	J	23
LWG0108R010TSSBWBC20	_ _ _	& 102	pg/g	11900	J	23
LWG0108R010TSSBWBC30	_ _ _	& 102	pg/g	33800	J	23
LWG0108R032TSSBWBC00	_ _ _	& 102	pg/g	10100	J	23
LWG0109R002TSCRWBC00	_ _ _	& 102	pg/g	235	J	23
LWG0109R002TSSPWBC00	_ _ _	& 102	pg/g	11900	J	23
LWG0109R006TSSBWBC00	_ _ _	& 102	pg/g	14900	J	23
LWG01FZ0306TSBBWBC10	_	& 102	pg/g	1370	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG01FZ0306TSBBWBC20	_ _ _	& 102	pg/g	3980	J	23
LWG01FZ0306TSBBWBC30	_ _ _	& 102	pg/g	2970	J	23
LWG01FZ0306TSBCWBC10	_ _ _	& 102	pg/g	1990	J	23
LWG01FZ0306TSBCWBC20	_ _ _	& 102	pg/g	2710	J	23
LWG01FZ0306TSCPWBC10	_ _ _	& 102	pg/g	13700	J	23
LWG01FZ0306TSCPWBC20	_ _ _	& 102	pg/g	209000	J	23
LWG01FZ0306TSCPWBC30	_ _ _	& 102	pg/g	7550	J	23
LWG01FZ0609TSBBWBC10	_ _ _	& 102	pg/g	13400	J	23
LWG01FZ0609TSBBWBC20	_ _ _	& 102	pg/g	5750	J	23
LWG01FZ0609TSBBWBC30	_ _ _	& 102	pg/g	5040	J	23
LWG01FZ0609TSBCWBC10	_ _ _	& 102	pg/g	3220	J	23
LWG01FZ0609TSBCWBC20	_ _ _	& 102	pg/g	6880	J	23
LWG01FZ0609TSCPWBC10	_	& 102	pg/g	12200	J	23
LWG01FZ0609TSCPWBC20	_ _ _	& 102	pg/g	14700	J	23
LWG01FZ0609TSCPWBC30	_	& 102	pg/g	30100	J	23
LWG0102R001TSCRWBC00	PCB107_124	PCB107 & 124	pg/g	68.7	J	23
LWG0102R001TSSPWBC00	PCB107_124	PCB107 & 124	pg/g	2010	J	23
LWG0103R003TSCRWBC00	PCB107_124	PCB107 & 124	pg/g	41.8	J	23, L
LWG0103R004TSCRWBC00	PCB107_124	PCB107 & 124	pg/g	32	J	23, L
LWG0103R004TSSPWBC10	PCB107_124	PCB107 & 124	pg/g	882	J	23
LWG0103R005TSCRWBC00	PCB107_124	PCB107 & 124	pg/g	107	J	23
LWG0103R005TSSPWBC00	PCB107_124	PCB107 & 124	pg/g	646	J	23
LWG0103R014TSSBWBC00	PCB107_124	PCB107 & 124	pg/g	1160	J	23
LWG0104R023TSSBWBC10	PCB107_124	PCB107 & 124	pg/g	1160	J	23
LWG0104R023TSSBWBC20	PCB107_124	PCB107 & 124	pg/g	505	J	23
LWG0104R023TSSBWBC30	PCB107_124	PCB107 & 124	pg/g	597	J	23
LWG0105R006TSSBWBC00	PCB107_124	PCB107 & 124	pg/g	596	J	23
LWG0106R002TSSPWBC10	PCB107_124	PCB107 & 124	pg/g	129	J	23
LWG0106R002TSSPWBC20	PCB107_124	PCB107 & 124	pg/g	170	J	23
LWG0106R004TSSPWBC00	PCB107_124	PCB107 & 124	pg/g	164	J	23
LWG0106R024TSSBWBC00	PCB107_124	PCB107 & 124	pg/g	333	J	23
LWG0107R006TSSPWBC00	PCB107_124	PCB107 & 124	pg/g	283	J	23
LWG0107R009TSSBWBC10	PCB107_124	PCB107 & 124	pg/g	297	J	23
LWG0107R009TSSBWBC20	PCB107_124	PCB107 & 124	pg/g	271	J	23
LWG0107R009TSSBWBC30	PCB107_124	PCB107 & 124	pg/g	348	J	23
LWG0108R003TSSPWBC00	PCB107_124	PCB107 & 124	pg/g	195	J	23
LWG0108R010TSSBWBC10	PCB107_124	PCB107 & 124	pg/g	539	J	23
LWG0108R010TSSBWBC20	PCB107_124	PCB107 & 124	pg/g	329	J	23
LWG0108R010TSSBWBC30	PCB107_124	PCB107 & 124	pg/g	464	J	23
LWG0108R032TSSBWBC00	PCB107_124	PCB107 & 124	pg/g	407	J	23
LWG0109R002TSSPWBC00	PCB107_124	PCB107 & 124	pg/g	740	J	23
LWG0109R006TSSBWBC00	PCB107_124	PCB107 & 124	pg/g	861	J	23
LWG01FZ0306TSBBWBC10	PCB107_124	PCB107 & 124	pg/g	59.6	J	23
LWG01FZ0306TSBBWBC20	PCB107_124	PCB107 & 124	pg/g	87.3	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG01FZ0306TSBBWBC30	PCB107_124	PCB107 & 124	pg/g	109	J	23
LWG01FZ0306TSBCWBC10	PCB107_124	PCB107 & 124	pg/g	161	J	23
LWG01FZ0306TSBCWBC20	PCB107_124	PCB107 & 124	pg/g	169	J	23
LWG01FZ0306TSCPWBC10	PCB107_124	PCB107 & 124	pg/g	479	J	23
LWG01FZ0306TSCPWBC20	PCB107_124	PCB107 & 124	pg/g	1910	J	23
LWG01FZ0306TSCPWBC30	PCB107_124	PCB107 & 124	pg/g	409	J	23
LWG01FZ0609TSBBWBC10	PCB107_124	PCB107 & 124	pg/g	232	J	23
LWG01FZ0609TSBBWBC20	PCB107_124	PCB107 & 124	pg/g	122	J	23
LWG01FZ0609TSBBWBC30	PCB107_124	PCB107 & 124	pg/g	134	J	23
LWG01FZ0609TSBCWBC10	PCB107_124	PCB107 & 124	pg/g	210	J	23
LWG01FZ0609TSBCWBC20	PCB107_124	PCB107 & 124	pg/g	407	J	23
LWG01FZ0609TSCPWBC10	PCB107_124	PCB107 & 124	pg/g	329	J	23
LWG01FZ0609TSCPWBC20	PCB107_124	PCB107 & 124	pg/g	524	J	23
LWG01FZ0609TSCPWBC30	PCB107_124	PCB107 & 124	pg/g	474	J	23
LWG0102R001TSCRWBC00	PCB110_115	PCB110 & 115	pg/g	302	J	23
LWG0102R001TSSPWBC00	PCB110_115	PCB110 & 115	pg/g	80500	J	23
LWG0103R003TSCRWBC00	PCB110_115	PCB110 & 115	pg/g	79.8	J	23
LWG0103R004TSCRWBC00	PCB110_115	PCB110 & 115	pg/g	154	J	23
LWG0103R004TSSPWBC10	PCB110_115	PCB110 & 115	pg/g	20800	J	23
LWG0103R005TSCRWBC00	PCB110_115	PCB110 & 115	pg/g	602	J	23
LWG0103R005TSSPWBC00	PCB110_115	PCB110 & 115	pg/g	27100	J	23
LWG0103R014TSSBWBC00	PCB110_115	PCB110 & 115	pg/g	39200	J	23
LWG0104R023TSSBWBC10	PCB110_115	PCB110 & 115	pg/g	34100	J	23
LWG0104R023TSSBWBC20	PCB110_115	PCB110 & 115	pg/g	15500	J	23
LWG0104R023TSSBWBC30	PCB110_115	PCB110 & 115	pg/g	23000	J	23
LWG0105R006TSSBWBC00	PCB110_115	PCB110 & 115	pg/g	17300	J	23
LWG0106R002TSSPWBC10	PCB110_115	PCB110 & 115	pg/g	3950	J	23
LWG0106R002TSSPWBC20	PCB110_115	PCB110 & 115	pg/g	11000	J	23
LWG0106R004TSCRWBC10	PCB110_115	PCB110 & 115	pg/g	42.3	J	23, L
LWG0106R004TSCRWBC20	PCB110_115	PCB110 & 115	pg/g	29.6	J	23, L
LWG0106R004TSSPWBC00	PCB110_115	PCB110 & 115	pg/g	4870	J	23
LWG0106R024TSSBWBC00	PCB110_115	PCB110 & 115	pg/g	10500	J	23
LWG0106R031TSCRWBC00	PCB110_115	PCB110 & 115	pg/g	48.8	J	23
LWG0107R006TSCRWBC00	PCB110_115	PCB110 & 115	pg/g	124	J	23
LWG0107R006TSSPWBC00	PCB110_115	PCB110 & 115	pg/g	29600	J	23
LWG0107R009TSSBWBC10	PCB110_115	PCB110 & 115	pg/g	11000	J	23
LWG0107R009TSSBWBC20	PCB110_115	PCB110 & 115	pg/g	12200	J	23
LWG0107R009TSSBWBC30	PCB110_115	PCB110 & 115	pg/g	18600	J	23
LWG0108R003TSCRWBC00	PCB110_115	PCB110 & 115	pg/g	52.5	J	23, L
LWG0108R003TSSPWBC00	PCB110_115	PCB110 & 115	pg/g	6060	J	23
LWG0108R010TSSBWBC10	PCB110_115	PCB110 & 115	pg/g	56900	J	23
LWG0108R010TSSBWBC20	PCB110_115	PCB110 & 115	pg/g	13900	J	23
LWG0108R010TSSBWBC30	PCB110_115	PCB110 & 115	pg/g	34500	J	23
LWG0108R032TSSBWBC00	PCB110_115	PCB110 & 115	pg/g	14000	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0109R002TSCRWBC00	PCB110_115	PCB110 & 115	pg/g	104	J	23
LWG0109R002TSSPWBC00	PCB110_115	PCB110 & 115	pg/g	25800	J	23
LWG0109R006TSSBWBC00	PCB110_115	PCB110 & 115	pg/g	23000	J	23
LWG01FZ0306TSBBWBC10	PCB110_115	PCB110 & 115	pg/g	3150	J	23
LWG01FZ0306TSBBWBC20	PCB110_115	PCB110 & 115	pg/g	6360	J	23
LWG01FZ0306TSBBWBC30	PCB110_115	PCB110 & 115	pg/g	5070	J	23
LWG01FZ0306TSBCWBC10	PCB110_115	PCB110 & 115	pg/g	3330	J	23
LWG01FZ0306TSBCWBC20	PCB110_115	PCB110 & 115	pg/g	4080	J	23
LWG01FZ0306TSCPWBC10	PCB110_115	PCB110 & 115	pg/g	20600	J	23
LWG01FZ0306TSCPWBC20	PCB110_115	PCB110 & 115	pg/g	128000	J	23
LWG01FZ0306TSCPWBC30	PCB110_115	PCB110 & 115	pg/g	10900	J	23
LWG01FZ0609TSBBWBC10	PCB110_115	PCB110 & 115	pg/g	7450	J	23
LWG01FZ0609TSBBWBC20	PCB110_115	PCB110 & 115	pg/g	7770	J	23
LWG01FZ0609TSBBWBC30	PCB110_115	PCB110 & 115	pg/g	7560	J	23
LWG01FZ0609TSBCWBC10	PCB110_115	PCB110 & 115	pg/g	4500	J	23
LWG01FZ0609TSBCWBC20	PCB110_115	PCB110 & 115	pg/g	8730	J	23
LWG01FZ0609TSCPWBC10	PCB110_115	PCB110 & 115	pg/g	12600	J	23
LWG01FZ0609TSCPWBC20	PCB110_115	PCB110 & 115	pg/g	17500	J	23
LWG01FZ0609TSCPWBC30	PCB110_115	PCB110 & 115	pg/g	23500	J	23
LWG0102R001TSCRWBC00	PCB128_166	PCB128 & 166	pg/g	72.7	J	23
LWG0102R001TSSPWBC00	PCB128_166	PCB128 & 166	pg/g	13200	J	23
LWG0103R003TSCRWBC00	PCB128_166	PCB128 & 166	pg/g	59.9	J	23
LWG0103R004TSCRWBC00	PCB128_166	PCB128 & 166	pg/g	101	J	23
LWG0103R004TSSPWBC10	PCB128_166	PCB128 & 166	pg/g	7300	J	23
LWG0103R005TSCRWBC00	PCB128_166	PCB128 & 166	pg/g	192	J	23
LWG0103R005TSSPWBC00	PCB128_166	PCB128 & 166	pg/g	8730	J	23
LWG0103R014TSSBWBC00	PCB128_166	PCB128 & 166	pg/g	7080	J	23
LWG0104R023TSSBWBC10	PCB128_166	PCB128 & 166	pg/g	9310	J	23
LWG0104R023TSSBWBC20	PCB128_166	PCB128 & 166	pg/g	5000	J	23
LWG0104R023TSSBWBC30	PCB128_166	PCB128 & 166	pg/g	4090	J	23
LWG0105R006TSSBWBC00	PCB128_166	PCB128 & 166	pg/g	4720	J	23
LWG0106R002TSSPWBC10	PCB128_166	PCB128 & 166	pg/g	2350	J	23
LWG0106R002TSSPWBC20	PCB128_166	PCB128 & 166	pg/g	13200	J	23
LWG0106R004TSCRWBC10	PCB128_166	PCB128 & 166	pg/g	30.6	J	23, L
LWG0106R004TSSPWBC00	PCB128_166	PCB128 & 166	pg/g	2190	J	23
LWG0106R024TSSBWBC00	PCB128_166	PCB128 & 166	pg/g	3840	J	23
LWG0106R031TSCRWBC00	PCB128_166	PCB128 & 166	pg/g	18.5	J	23, L
LWG0107R006TSCRWBC00	PCB128_166	PCB128 & 166	pg/g	37.9	J	23, L
LWG0107R006TSSPWBC00	PCB128_166	PCB128 & 166	pg/g	3880	J	23
LWG0107R009TSSBWBC10	PCB128_166	PCB128 & 166	pg/g	4960	J	23
LWG0107R009TSSBWBC20	PCB128_166	PCB128 & 166	pg/g	3510	J	23
LWG0107R009TSSBWBC30	PCB128_166	PCB128 & 166	pg/g	3720	J	23
LWG0108R003TSCRWBC00	PCB128_166	PCB128 & 166	pg/g	21.5	J	23, L
LWG0108R003TSSPWBC00	PCB128_166	PCB128 & 166	pg/g	3760	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0108R010TSSBWBC10	PCB128_166	PCB128 & 166	pg/g	29300	J	23
LWG0108R010TSSBWBC20	PCB128_166	PCB128 & 166	pg/g	7810	J	23
LWG0108R010TSSBWBC30	PCB128_166	PCB128 & 166	pg/g	18000	J	23
LWG0109R002TSCRWBC00	PCB128_166	PCB128 & 166	pg/g	45.7	J	23, L
LWG0109R002TSSPWBC00	PCB128_166	PCB128 & 166	pg/g	7010	J	23
LWG0109R006TSSBWBC00	PCB128_166	PCB128 & 166	pg/g	8440	J	23
LWG01FZ0306TSBBWBC10	PCB128_166	PCB128 & 166	pg/g	1000	J	23
LWG01FZ0306TSBBWBC20	PCB128_166	PCB128 & 166	pg/g	1850	J	23
LWG01FZ0306TSBBWBC30	PCB128_166	PCB128 & 166	pg/g	3330	J	23
LWG01FZ0306TSBCWBC10	PCB128_166	PCB128 & 166	pg/g	903	J	23
LWG01FZ0306TSBCWBC20	PCB128_166	PCB128 & 166	pg/g	951	J	23
LWG01FZ0306TSCPWBC10	PCB128_166	PCB128 & 166	pg/g	2890	J	23
LWG01FZ0306TSCPWBC20	PCB128_166	PCB128 & 166	pg/g	32700	J	23
LWG01FZ0306TSCPWBC30	PCB128_166	PCB128 & 166	pg/g	2550	J	23
LWG01FZ0609TSBBWBC10	PCB128_166	PCB128 & 166	pg/g	13700	J	23
LWG01FZ0609TSBBWBC20	PCB128_166	PCB128 & 166	pg/g	2420	J	23
LWG01FZ0609TSBBWBC30	PCB128_166	PCB128 & 166	pg/g	2040	J	23
LWG01FZ0609TSBCWBC10	PCB128_166	PCB128 & 166	pg/g	1140	J	23
LWG01FZ0609TSBCWBC20	PCB128_166	PCB128 & 166	pg/g	2070	J	23
LWG01FZ0609TSCPWBC10	PCB128_166	PCB128 & 166	pg/g	3920	J	23
LWG01FZ0609TSCPWBC20	PCB128_166	PCB128 & 166	pg/g	4540	J	23
LWG01FZ0609TSCPWBC30	PCB128_166	PCB128 & 166	pg/g	6440	J	23
LWG0102R001TSCRWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	2540	J	23
LWG0102R001TSSPWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	85000	J	23
LWG0103R003TSCRWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	4850	J	23
LWG0103R004TSCRWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	2130	J	23
LWG0103R004TSSPWBC10	_ _ _	PCB129 & 138 & 160 & 163	pg/g	47500	J	23
LWG0103R005TSCRWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	14700	J	23
LWG0103R005TSSPWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	76500	J	23
LWG0103R014TSSBWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	62400	J	23
LWG0104R023TSSBWBC10	_ _ _	PCB129 & 138 & 160 & 163	pg/g	78900	J	23
LWG0104R023TSSBWBC20	_ _ _	PCB129 & 138 & 160 & 163	pg/g	40800	J	23
LWG0104R023TSSBWBC30	_ _ _	PCB129 & 138 & 160 & 163	pg/g	29400	J	23
LWG0105R006TSSBWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	36000	J	23
LWG0106R002TSSPWBC10	_ _ _	PCB129 & 138 & 160 & 163	pg/g	40400	J	23
LWG0106R002TSSPWBC20	_ _ _	PCB129 & 138 & 160 & 163	pg/g	293000	J	23
LWG0106R004TSCRWBC10	_ _ _	PCB129 & 138 & 160 & 163	pg/g	1350	J	23
LWG0106R004TSCRWBC20	_ _ _	PCB129 & 138 & 160 & 163	pg/g	1110	J	23
LWG0106R004TSSPWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	18700	J	23
LWG0106R024TSSBWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	36500	J	23
LWG0106R031TSCRWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	1900	J	23
LWG0107R006TSCRWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	1750	J	23
LWG0107R006TSSPWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	32300	J	23
LWG0107R009TSSBWBC10	_	PCB129 & 138 & 160 & 163	pg/g	50300	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0107R009TSSBWBC20	_ _ _	PCB129 & 138 & 160 & 163	pg/g	45300	J	23
LWG0107R009TSSBWBC30	_ _ _	PCB129 & 138 & 160 & 163	pg/g	43200	J	23
LWG0108R003TSCRWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	2980	J	23
LWG0108R003TSSPWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	39100	J	23
LWG0108R010TSSBWBC10	_ _ _	PCB129 & 138 & 160 & 163	pg/g	516000	J	23
LWG0108R010TSSBWBC20	_ _ _	PCB129 & 138 & 160 & 163	pg/g	125000	J	23
LWG0108R010TSSBWBC30	_ _ _	PCB129 & 138 & 160 & 163	pg/g	405000	J	23
LWG0108R032TSSBWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	66300	J	23
LWG0109R002TSCRWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	5800	J	23
LWG0109R002TSSPWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	91200	J	23
LWG0109R006TSSBWBC00	_ _ _	PCB129 & 138 & 160 & 163	pg/g	72600	J	23
LWG01FZ0306TSBBWBC10	_ _ _	PCB129 & 138 & 160 & 163	pg/g	8210	J	23
LWG01FZ0306TSBBWBC20	_ _ _	PCB129 & 138 & 160 & 163	pg/g	16700	J	23
LWG01FZ0306TSBBWBC30	_ _ _	PCB129 & 138 & 160 & 163	pg/g	30400	J	23
LWG01FZ0306TSBCWBC10	_ _ _	PCB129 & 138 & 160 & 163	pg/g	8590	J	23
LWG01FZ0306TSBCWBC20	_ _ _	PCB129 & 138 & 160 & 163	pg/g	8210	J	23
LWG01FZ0306TSCPWBC10	_ _ _	PCB129 & 138 & 160 & 163	pg/g	28900	J	23
LWG01FZ0306TSCPWBC20	_ _ _	PCB129 & 138 & 160 & 163	pg/g	634000	J	23
LWG01FZ0306TSCPWBC30	_ _ _	PCB129 & 138 & 160 & 163	pg/g	29100	J	23
LWG01FZ0609TSBBWBC10	_ _ _	PCB129 & 138 & 160 & 163	pg/g	206000	J	23
LWG01FZ0609TSBBWBC20	_ _ _	PCB129 & 138 & 160 & 163	pg/g	24400	J	23
LWG01FZ0609TSBBWBC30	_ _ _	PCB129 & 138 & 160 & 163	pg/g	31400	J	23
LWG01FZ0609TSBCWBC10	_ _ _	PCB129 & 138 & 160 & 163	pg/g	13400	J	23
LWG01FZ0609TSBCWBC20	_ _ _	PCB129 & 138 & 160 & 163	pg/g	20100	J	23
LWG01FZ0609TSCPWBC10	_ _ _	PCB129 & 138 & 160 & 163	pg/g	51300	J	23
LWG01FZ0609TSCPWBC20	_ _ _	PCB129 & 138 & 160 & 163	pg/g	59600	J	23
LWG01FZ0609TSCPWBC30	_	PCB129 & 138 & 160 & 163	pg/g	119000	J	23
LWG0102R001TSCRWBC00	PCB134_143	PCB134 & 143	pg/g	16.1	J	23, L
LWG0102R001TSSPWBC00	PCB134_143	PCB134 & 143	pg/g	765	J	23
LWG0103R003TSCRWBC00	PCB134_143	PCB134 & 143	pg/g	56.5	J	23
LWG0103R004TSCRWBC00	PCB134_143	PCB134 & 143	pg/g	24.5	J	23, L
LWG0103R004TSSPWBC10	PCB134_143	PCB134 & 143	pg/g	509	J	23
LWG0103R005TSCRWBC00	PCB134_143	PCB134 & 143	pg/g	141	J	23
LWG0103R005TSSPWBC00	PCB134_143	PCB134 & 143	pg/g	753	J	23
LWG0104R023TSSBWBC10	PCB134_143	PCB134 & 143	pg/g	1550	J	23
LWG0104R023TSSBWBC20	PCB134_143	PCB134 & 143	pg/g	705	J	23
LWG0104R023TSSBWBC30	PCB134_143	PCB134 & 143	pg/g	627	J	23
LWG0105R006TSSBWBC00	PCB134_143	PCB134 & 143	pg/g	721	J	23
LWG0106R002TSSPWBC10	PCB134_143	PCB134 & 143	pg/g	427	J	23
LWG0106R002TSSPWBC20	PCB134_143	PCB134 & 143	pg/g	2280	J	23
LWG0106R004TSCRWBC10	PCB134_143	PCB134 & 143	pg/g	19.9	J	23, L
LWG0106R004TSSPWBC00	PCB134_143	PCB134 & 143	pg/g	151	J	23
LWG0106R024TSSBWBC00	PCB134_143	PCB134 & 143	pg/g	611	J	23
LWG0106R031TSCRWBC00	PCB134_143	PCB134 & 143	pg/g	16.4	J	23, L

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0107R006TSSPWBC00	PCB134_143	PCB134 & 143	pg/g	246	J	23
LWG0107R009TSSBWBC10	PCB134_143	PCB134 & 143	pg/g	616	J	23
LWG0107R009TSSBWBC20	PCB134_143	PCB134 & 143	pg/g	803	J	23
LWG0107R009TSSBWBC30	PCB134_143	PCB134 & 143	pg/g	885	J	23
LWG0108R003TSSPWBC00	PCB134_143	PCB134 & 143	pg/g	266	J	23
LWG0108R010TSSBWBC10	PCB134_143	PCB134 & 143	pg/g	11700	J	23
LWG0108R010TSSBWBC20	PCB134_143	PCB134 & 143	pg/g	1320	J	23
LWG0108R010TSSBWBC30	PCB134_143	PCB134 & 143	pg/g	8220	J	23
LWG0108R032TSSBWBC00	PCB134_143	PCB134 & 143	pg/g	914	J	23
LWG0109R002TSCRWBC00	PCB134_143	PCB134 & 143	pg/g	60.9	J	23, L
LWG0109R002TSSPWBC00	PCB134_143	PCB134 & 143	pg/g	818	J	23
LWG0109R006TSSBWBC00	PCB134_143	PCB134 & 143	pg/g	1080	J	23
LWG01FZ0306TSBBWBC10	PCB134_143	PCB134 & 143	pg/g	216	J	23
LWG01FZ0306TSBBWBC30	PCB134_143	PCB134 & 143	pg/g	210	J	23
LWG01FZ0306TSBCWBC10	PCB134_143	PCB134 & 143	pg/g	133	J	23
LWG01FZ0306TSBCWBC20	PCB134_143	PCB134 & 143	pg/g	189	J	23
LWG01FZ0306TSCPWBC10	PCB134_143	PCB134 & 143	pg/g	828	J	23
LWG01FZ0306TSCPWBC20	PCB134_143	PCB134 & 143	pg/g	31600	J	23
LWG01FZ0306TSCPWBC30	PCB134_143	PCB134 & 143	pg/g	946	J	23
LWG01FZ0609TSBBWBC10	PCB134_143	PCB134 & 143	pg/g	3760	J	23
LWG01FZ0609TSBBWBC20	PCB134_143	PCB134 & 143	pg/g	704	J	23
LWG01FZ0609TSCPWBC10	PCB134_143	PCB134 & 143	pg/g	1740	J	23
LWG01FZ0609TSCPWBC20	PCB134_143	PCB134 & 143	pg/g	1680	J	23
LWG01FZ0609TSCPWBC30	PCB134_143	PCB134 & 143	pg/g	3850	J	23
LWG0102R001TSCRWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	189	J	23
LWG0102R001TSSPWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	11000	J	23
LWG0103R003TSCRWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	315	J	23
LWG0103R004TSCRWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	171	J	23
LWG0103R004TSSPWBC10	PCB135_151_154	PCB135 & 151 & 154	pg/g	6360	J	23
LWG0103R005TSCRWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	847	J	23
LWG0103R005TSSPWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	16900	J	23
LWG0103R014TSSBWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	14500	J	23
LWG0104R023TSSBWBC10	PCB135_151_154	PCB135 & 151 & 154	pg/g	16500	J	23
LWG0104R023TSSBWBC20	PCB135_151_154	PCB135 & 151 & 154	pg/g	7650	J	23
LWG0104R023TSSBWBC30	PCB135_151_154	PCB135 & 151 & 154	pg/g	6730	J	23
LWG0105R006TSSBWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	7550	J	23
LWG0106R002TSSPWBC10	PCB135_151_154	PCB135 & 151 & 154	pg/g	9830	J	23
LWG0106R002TSSPWBC20	PCB135_151_154	PCB135 & 151 & 154	pg/g	63800	J	23
LWG0106R004TSCRWBC10	PCB135_151_154	PCB135 & 151 & 154	pg/g	143	J	23
LWG0106R004TSSPWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	3580	J	23
LWG0106R024TSSBWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	7020	J	23
LWG0106R031TSCRWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	308	J	23
LWG0107R006TSCRWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	105	J	23, L
LWG0107R006TSSPWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	5930	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0107R009TSSBWBC10	PCB135_151_154	PCB135 & 151 & 154	pg/g	12200	J	23
LWG0107R009TSSBWBC20	PCB135_151_154	PCB135 & 151 & 154	pg/g	11200	J	23
LWG0107R009TSSBWBC30	PCB135_151_154	PCB135 & 151 & 154	pg/g	10700	J	23
LWG0108R003TSCRWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	231	J	23
LWG0108R003TSSPWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	8390	J	23
LWG0108R010TSSBWBC10	PCB135_151_154	PCB135 & 151 & 154	pg/g	159000	J	23
LWG0108R010TSSBWBC20	PCB135_151_154	PCB135 & 151 & 154	pg/g	26700	J	23
LWG0108R010TSSBWBC30	PCB135_151_154	PCB135 & 151 & 154	pg/g	101000	J	23
LWG0108R032TSSBWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	16900	J	23
LWG0109R002TSCRWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	691	J	23
LWG0109R002TSSPWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	25500	J	23
LWG0109R006TSSBWBC00	PCB135_151_154	PCB135 & 151 & 154	pg/g	13600	J	23
LWG01FZ0306TSBBWBC10	PCB135_151_154	PCB135 & 151 & 154	pg/g	2140	J	23
LWG01FZ0306TSBBWBC20	PCB135_151_154	PCB135 & 151 & 154	pg/g	3990	J	23
LWG01FZ0306TSBBWBC30	PCB135_151_154	PCB135 & 151 & 154	pg/g	3390	J	23
LWG01FZ0306TSBCWBC10	PCB135_151_154	PCB135 & 151 & 154	pg/g	1790	J	23
LWG01FZ0306TSBCWBC20	PCB135_151_154	PCB135 & 151 & 154	pg/g	1880	J	23
LWG01FZ0306TSCPWBC10	PCB135_151_154	PCB135 & 151 & 154	pg/g	8300	J	23
LWG01FZ0306TSCPWBC20	PCB135_151_154	PCB135 & 151 & 154	pg/g	287000	J	23
LWG01FZ0306TSCPWBC30	PCB135_151_154	PCB135 & 151 & 154	pg/g	9840	J	23
LWG01FZ0609TSBBWBC10	PCB135_151_154	PCB135 & 151 & 154	pg/g	46800	J	23
LWG01FZ0609TSBBWBC20	PCB135_151_154	PCB135 & 151 & 154	pg/g	7710	J	23
LWG01FZ0609TSBBWBC30	PCB135_151_154	PCB135 & 151 & 154	pg/g	8280	J	23
LWG01FZ0609TSBCWBC10	PCB135_151_154	PCB135 & 151 & 154	pg/g	3190	J	23
LWG01FZ0609TSBCWBC20	PCB135_151_154	PCB135 & 151 & 154	pg/g	5270	J	23
LWG01FZ0609TSCPWBC10	PCB135_151_154	PCB135 & 151 & 154	pg/g	19700	J	23
LWG01FZ0609TSCPWBC20	PCB135_151_154	PCB135 & 151 & 154	pg/g	17300	J	23
LWG01FZ0609TSCPWBC30	PCB135_151_154	PCB135 & 151 & 154	pg/g	48700	J	23
LWG0102R001TSCRWBC00	PCB139_140	PCB139 & 140	pg/g	31.3	J	23, L
LWG0102R001TSSPWBC00	PCB139_140	PCB139 & 140	pg/g	1780	J	23
LWG0103R003TSCRWBC00	PCB139_140	PCB139 & 140	pg/g	25.6	J	23, L
LWG0103R004TSCRWBC00	PCB139_140	PCB139 & 140	pg/g	13.6	J	23, L
LWG0103R004TSSPWBC10	PCB139_140	PCB139 & 140	pg/g	853	J	23
LWG0103R005TSCRWBC00	PCB139_140	PCB139 & 140	pg/g	54.8	J	23
LWG0103R005TSSPWBC00	PCB139_140	PCB139 & 140	pg/g	1070	J	23
LWG0103R014TSSBWBC00	PCB139_140	PCB139 & 140	pg/g	1000	J	23
LWG0104R023TSSBWBC10	PCB139_140	PCB139 & 140	pg/g	1140	J	23
LWG0104R023TSSBWBC20	PCB139_140	PCB139 & 140	pg/g	585	J	23
LWG0104R023TSSBWBC30	PCB139_140	PCB139 & 140	pg/g	503	J	23
LWG0105R006TSSBWBC00	PCB139_140	PCB139 & 140	pg/g	619	J	23
LWG0106R002TSSPWBC10	PCB139_140	PCB139 & 140	pg/g	294	J	23
LWG0106R002TSSPWBC20	PCB139_140	PCB139 & 140	pg/g	1220	J	23
LWG0106R004TSSPWBC00	PCB139_140	PCB139 & 140	pg/g	269	J	23
LWG0106R024TSSBWBC00	PCB139_140	PCB139 & 140	pg/g	423	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0107R006TSSPWBC00	PCB139_140	PCB139 & 140	pg/g	603	J	23
LWG0107R009TSSBWBC10	PCB139_140	PCB139 & 140	pg/g	630	J	23
LWG0107R009TSSBWBC20	PCB139_140	PCB139 & 140	pg/g	564	J	23
LWG0107R009TSSBWBC30	PCB139_140	PCB139 & 140	pg/g	622	J	23
LWG0108R003TSSPWBC00	PCB139_140	PCB139 & 140	pg/g	421	J	23
LWG0108R010TSSBWBC10	PCB139_140	PCB139 & 140	pg/g	3840	J	23
LWG0108R010TSSBWBC20	PCB139_140	PCB139 & 140	pg/g	908	J	23
LWG0108R010TSSBWBC30	PCB139_140	PCB139 & 140	pg/g	1670	J	23
LWG0108R032TSSBWBC00	PCB139_140	PCB139 & 140	pg/g	835	J	23
LWG0109R002TSSPWBC00	PCB139_140	PCB139 & 140	pg/g	1130	J	23
LWG0109R006TSSBWBC00	PCB139_140	PCB139 & 140	pg/g	882	J	23
LWG01FZ0306TSBBWBC10	PCB139_140	PCB139 & 140	pg/g	82.9	J	23
LWG01FZ0306TSBBWBC20	PCB139_140	PCB139 & 140	pg/g	197	J	23
LWG01FZ0306TSBBWBC30	PCB139_140	PCB139 & 140	pg/g	248	J	23
LWG01FZ0306TSBCWBC10	PCB139_140	PCB139 & 140	pg/g	119	J	23
LWG01FZ0306TSBCWBC20	PCB139_140	PCB139 & 140	pg/g	117	J	23
LWG01FZ0306TSCPWBC10	PCB139_140	PCB139 & 140	pg/g	370	J	23
LWG01FZ0306TSCPWBC20	PCB139_140	PCB139 & 140	pg/g	3020	J	23
LWG01FZ0306TSCPWBC30	PCB139_140	PCB139 & 140	pg/g	412	J	23
LWG01FZ0609TSBBWBC10	PCB139_140	PCB139 & 140	pg/g	309	J	23
LWG01FZ0609TSBBWBC20	PCB139_140	PCB139 & 140	pg/g	199	J	23
LWG01FZ0609TSBBWBC30	PCB139_140	PCB139 & 140	pg/g	278	J	23
LWG01FZ0609TSBCWBC10	PCB139_140	PCB139 & 140	pg/g	186	J	23
LWG01FZ0609TSBCWBC20	PCB139_140	PCB139 & 140	pg/g	277	J	23
LWG01FZ0609TSCPWBC10	PCB139_140	PCB139 & 140	pg/g	629	J	23
LWG01FZ0609TSCPWBC20	PCB139_140	PCB139 & 140	pg/g	499	J	23
LWG01FZ0609TSCPWBC30	PCB139_140	PCB139 & 140	pg/g	845	J	23
LWG0102R001TSCRWBC00	PCB147_149	PCB147 & 149	pg/g	381	J	23
LWG0102R001TSSPWBC00	PCB147_149	PCB147 & 149	pg/g	5330	J	23
LWG0103R003TSCRWBC00	PCB147_149	PCB147 & 149	pg/g	572	J	23
LWG0103R004TSCRWBC00	PCB147_149	PCB147 & 149	pg/g	315	J	23
LWG0103R004TSSPWBC10	PCB147_149	PCB147 & 149	pg/g	4510	J	23
LWG0103R005TSCRWBC00	PCB147_149	PCB147 & 149	pg/g	1750	J	23
LWG0103R005TSSPWBC00	PCB147_149	PCB147 & 149	pg/g	8450	J	23
LWG0103R014TSSBWBC00	PCB147_149	PCB147 & 149	pg/g	20000	J	23
LWG0104R023TSSBWBC10	PCB147_149	PCB147 & 149	pg/g	23600	J	23
LWG0104R023TSSBWBC20	PCB147_149	PCB147 & 149	pg/g	10600	J	23
LWG0104R023TSSBWBC30	PCB147_149	PCB147 & 149	pg/g	10600	J	23
LWG0105R006TSSBWBC00	PCB147_149	PCB147 & 149	pg/g	9590	J	23
LWG0106R002TSSPWBC10	PCB147_149	PCB147 & 149	pg/g	6060	J	23
LWG0106R002TSSPWBC20	PCB147_149	PCB147 & 149	pg/g	18900	J	23
LWG0106R004TSCRWBC10	PCB147_149	PCB147 & 149	pg/g	206	J	23
LWG0106R004TSCRWBC20	PCB147_149	PCB147 & 149	pg/g	76.4	J	23, L
LWG0106R004TSSPWBC00	PCB147_149	PCB147 & 149	pg/g	1650	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0106R024TSSBWBC00	PCB147_149	PCB147 & 149	pg/g	12000	J	23
LWG0106R031TSCRWBC00	PCB147_149	PCB147 & 149	pg/g	456	J	23
LWG0107R006TSCRWBC00	PCB147_149	PCB147 & 149	pg/g	203	J	23
LWG0107R006TSSPWBC00	PCB147_149	PCB147 & 149	pg/g	2730	J	23
LWG0107R009TSSBWBC10	PCB147_149	PCB147 & 149	pg/g	13300	J	23
LWG0107R009TSSBWBC20	PCB147_149	PCB147 & 149	pg/g	15000	J	23
LWG0107R009TSSBWBC30	PCB147_149	PCB147 & 149	pg/g	14500	J	23
LWG0108R003TSCRWBC00	PCB147_149	PCB147 & 149	pg/g	353	J	23
LWG0108R003TSSPWBC00	PCB147_149	PCB147 & 149	pg/g	3250	J	23
LWG0108R010TSSBWBC10	PCB147_149	PCB147 & 149	pg/g	188000	J	23
LWG0108R010TSSBWBC20	PCB147_149	PCB147 & 149	pg/g	26100	J	23
LWG0108R010TSSBWBC30	PCB147_149	PCB147 & 149	pg/g	126000	J	23
LWG0109R002TSCRWBC00	PCB147_149	PCB147 & 149	pg/g	895	J	23
LWG0109R002TSSPWBC00	PCB147_149	PCB147 & 149	pg/g	16800	J	23
LWG0109R006TSSBWBC00	PCB147_149	PCB147 & 149	pg/g	19000	J	23
LWG01FZ0306TSBBWBC10	PCB147_149	PCB147 & 149	pg/g	3530	J	23
LWG01FZ0306TSBBWBC20	PCB147_149	PCB147 & 149	pg/g	6680	J	23
LWG01FZ0306TSBBWBC30	PCB147_149	PCB147 & 149	pg/g	5000	J	23
LWG01FZ0306TSBCWBC10	PCB147_149	PCB147 & 149	pg/g	3710	J	23
LWG01FZ0306TSBCWBC20	PCB147_149	PCB147 & 149	pg/g	3800	J	23
LWG01FZ0306TSCPWBC10	PCB147_149	PCB147 & 149	pg/g	17700	J	23
LWG01FZ0306TSCPWBC20	PCB147_149	PCB147 & 149	pg/g	654000	J	23
LWG01FZ0306TSCPWBC30	PCB147_149	PCB147 & 149	pg/g	20400	J	23
LWG01FZ0609TSBBWBC10	PCB147_149	PCB147 & 149	pg/g	104000	J	23
LWG01FZ0609TSBBWBC20	PCB147_149	PCB147 & 149	pg/g	14100	J	23
LWG01FZ0609TSBBWBC30	PCB147_149	PCB147 & 149	pg/g	11600	J	23
LWG01FZ0609TSBCWBC10	PCB147_149	PCB147 & 149	pg/g	6460	J	23
LWG01FZ0609TSBCWBC20	PCB147_149	PCB147 & 149	pg/g	10600	J	23
LWG01FZ0609TSCPWBC10	PCB147_149	PCB147 & 149	pg/g	33900	J	23
LWG01FZ0609TSCPWBC20	PCB147_149	PCB147 & 149	pg/g	39000	J	23
LWG01FZ0609TSCPWBC30	PCB147_149	PCB147 & 149	pg/g	102000	J	23
LWG0102R001TSCRWBC00	PCB153_168	PCB153 & 168	pg/g	6660	J	23
LWG0102R001TSSPWBC00	PCB153_168	PCB153 & 168	pg/g	74100	J	23
LWG0103R003TSCRWBC00	PCB153_168	PCB153 & 168	pg/g	8980	J	23
LWG0103R004TSCRWBC00	PCB153_168	PCB153 & 168	pg/g	3610	J	23
LWG0103R004TSSPWBC10	PCB153_168	PCB153 & 168	pg/g	42300	J	23
LWG0103R005TSCRWBC00	PCB153_168	PCB153 & 168	pg/g	30700	J	23
LWG0103R005TSSPWBC00	PCB153_168	PCB153 & 168	pg/g	81100	J	23
LWG0103R014TSSBWBC00	PCB153_168	PCB153 & 168	pg/g	65400	J	23
LWG0104R023TSSBWBC10	PCB153_168	PCB153 & 168	pg/g	86000	J	23
LWG0104R023TSSBWBC20	PCB153_168	PCB153 & 168	pg/g	44900	J	23
LWG0104R023TSSBWBC30	PCB153_168	PCB153 & 168	pg/g	34600	J	23
LWG0105R006TSSBWBC00	PCB153_168	PCB153 & 168	pg/g	38700	J	23
LWG0106R002TSSPWBC10	PCB153_168	PCB153 & 168	pg/g	59800	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0106R002TSSPWBC20	PCB153_168	PCB153 & 168	pg/g	369000	J	23
LWG0106R004TSCRWBC10	PCB153_168	PCB153 & 168	pg/g	2280	J	23
LWG0106R004TSCRWBC20	PCB153_168	PCB153 & 168	pg/g	3500	J	23
LWG0106R004TSSPWBC00	PCB153_168	PCB153 & 168	pg/g	22100	J	23
LWG0106R024TSSBWBC00	PCB153_168	PCB153 & 168	pg/g	42100	J	23
LWG0106R031TSCRWBC00	PCB153_168	PCB153 & 168	pg/g	4130	J	23
LWG0107R006TSCRWBC00	PCB153_168	PCB153 & 168	pg/g	4550	J	23
LWG0107R006TSSPWBC00	PCB153_168	PCB153 & 168	pg/g	32000	J	23
LWG0107R009TSSBWBC10	PCB153_168	PCB153 & 168	pg/g	68600	J	23
LWG0107R009TSSBWBC20	PCB153_168	PCB153 & 168	pg/g	62000	J	23
LWG0107R009TSSBWBC30	PCB153_168	PCB153 & 168	pg/g	52200	J	23
LWG0108R003TSCRWBC00	PCB153_168	PCB153 & 168	pg/g	7720	J	23
LWG0108R003TSSPWBC00	PCB153_168	PCB153 & 168	pg/g	50300	J	23
LWG0108R010TSSBWBC10	PCB153_168	PCB153 & 168	pg/g	633000	J	23
LWG0108R010TSSBWBC20	PCB153_168	PCB153 & 168	pg/g	167000	J	23
LWG0108R010TSSBWBC30	PCB153_168	PCB153 & 168	pg/g	538000	J	23
LWG0109R002TSCRWBC00	PCB153_168	PCB153 & 168	pg/g	12400	J	23
LWG0109R002TSSPWBC00	PCB153_168	PCB153 & 168	pg/g	106000	J	23
LWG0109R006TSSBWBC00	PCB153_168	PCB153 & 168	pg/g	77000	J	23
LWG01FZ0306TSBBWBC10	PCB153_168	PCB153 & 168	pg/g	5470	J	23
LWG01FZ0306TSBBWBC20	PCB153_168	PCB153 & 168	pg/g	16100	J	23
LWG01FZ0306TSBBWBC30	PCB153_168	PCB153 & 168	pg/g	23000	J	23
LWG01FZ0306TSBCWBC10	PCB153_168	PCB153 & 168	pg/g	9980	J	23
LWG01FZ0306TSBCWBC20	PCB153_168	PCB153 & 168	pg/g	8820	J	23
LWG01FZ0306TSCPWBC10	PCB153_168	PCB153 & 168	pg/g	35800	J	23
LWG01FZ0306TSCPWBC20	PCB153_168	PCB153 & 168	pg/g	782000	J	23
LWG01FZ0306TSCPWBC30	PCB153_168	PCB153 & 168	pg/g	39800	J	23
LWG01FZ0609TSBBWBC10	PCB153_168	PCB153 & 168	pg/g	285000	J	23
LWG01FZ0609TSBBWBC20	PCB153_168	PCB153 & 168	pg/g	23300	J	23
LWG01FZ0609TSBBWBC30	PCB153_168	PCB153 & 168	pg/g	42100	J	23
LWG01FZ0609TSBCWBC10	PCB153_168	PCB153 & 168	pg/g	15800	J	23
LWG01FZ0609TSBCWBC20	PCB153_168	PCB153 & 168	pg/g	22700	J	23
LWG01FZ0609TSCPWBC10	PCB153_168	PCB153 & 168	pg/g	61700	J	23
LWG01FZ0609TSCPWBC20	PCB153_168	PCB153 & 168	pg/g	62300	J	23
LWG01FZ0609TSCPWBC30	PCB153_168	PCB153 & 168	pg/g	163000	J	23
LWG0102R001TSCRWBC00	PCB171_173	PCB171 & 173	pg/g	69	J	23
LWG0102R001TSSPWBC00	PCB171_173	PCB171 & 173	pg/g	2780	J	23
LWG0103R003TSCRWBC00	PCB171_173	PCB171 & 173	pg/g	215	J	23
LWG0103R004TSCRWBC00	PCB171_173	PCB171 & 173	pg/g	43.7	J	23
LWG0103R004TSSPWBC10	PCB171_173	PCB171 & 173	pg/g	1720	J	23
LWG0103R005TSCRWBC00	PCB171_173	PCB171 & 173	pg/g	674	J	23
LWG0103R005TSSPWBC00	PCB171_173	PCB171 & 173	pg/g	4170	J	23
LWG0103R014TSSBWBC00	PCB171_173	PCB171 & 173	pg/g	3510	J	23
LWG0104R023TSSBWBC10	PCB171_173	PCB171 & 173	pg/g	4820	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0104R023TSSBWBC20	PCB171_173	PCB171 & 173	pg/g	2630	J	23
LWG0104R023TSSBWBC30	PCB171_173	PCB171 & 173	pg/g	1780	J	23
LWG0105R006TSSBWBC00	PCB171_173	PCB171 & 173	pg/g	2520	J	23
LWG0106R002TSSPWBC10	PCB171_173	PCB171 & 173	pg/g	4110	J	23
LWG0106R002TSSPWBC20	PCB171_173	PCB171 & 173	pg/g	47300	J	23
LWG0106R004TSCRWBC10	PCB171_173	PCB171 & 173	pg/g	38.6	J	23, L
LWG0106R004TSSPWBC00	PCB171_173	PCB171 & 173	pg/g	1860	J	23
LWG0106R024TSSBWBC00	PCB171_173	PCB171 & 173	pg/g	2580	J	23
LWG0106R031TSCRWBC00	PCB171_173	PCB171 & 173	pg/g	91.9	J	23
LWG0107R006TSCRWBC00	PCB171_173	PCB171 & 173	pg/g	41.3	J	23, L
LWG0107R006TSSPWBC00	PCB171_173	PCB171 & 173	pg/g	2330	J	23
LWG0107R009TSSBWBC10	PCB171_173	PCB171 & 173	pg/g	4910	J	23
LWG0107R009TSSBWBC20	PCB171_173	PCB171 & 173	pg/g	3460	J	23
LWG0107R009TSSBWBC30	PCB171_173	PCB171 & 173	pg/g	3270	J	23
LWG0108R003TSCRWBC00	PCB171_173	PCB171 & 173	pg/g	119	J	23
LWG0108R003TSSPWBC00	PCB171_173	PCB171 & 173	pg/g	4720	J	23
LWG0108R010TSSBWBC10	PCB171_173	PCB171 & 173	pg/g	66400	J	23
LWG0108R010TSSBWBC20	PCB171_173	PCB171 & 173	pg/g	14400	J	23
LWG0108R010TSSBWBC30	PCB171_173	PCB171 & 173	pg/g	45600	J	23
LWG0108R032TSSBWBC00	PCB171_173	PCB171 & 173	pg/g	6670	J	23
LWG0109R002TSCRWBC00	PCB171_173	PCB171 & 173	pg/g	158	J	23
LWG0109R002TSSPWBC00	PCB171_173	PCB171 & 173	pg/g	7080	J	23
LWG0109R006TSSBWBC00	PCB171_173	PCB171 & 173	pg/g	4670	J	23
LWG01FZ0306TSBBWBC10	PCB171_173	PCB171 & 173	pg/g	641	J	23
LWG01FZ0306TSBBWBC20	PCB171_173	PCB171 & 173	pg/g	1130	J	23
LWG01FZ0306TSBBWBC30	PCB171_173	PCB171 & 173	pg/g	1510	J	23
LWG01FZ0306TSBCWBC10	PCB171_173	PCB171 & 173	pg/g	521	J	23
LWG01FZ0306TSBCWBC20	PCB171_173	PCB171 & 173	pg/g	508	J	23
LWG01FZ0306TSCPWBC10	PCB171_173	PCB171 & 173	pg/g	3050	J	23
LWG01FZ0306TSCPWBC20	PCB171_173	PCB171 & 173	pg/g	90900	J	23
LWG01FZ0306TSCPWBC30	PCB171_173	PCB171 & 173	pg/g	1780	J	23
LWG01FZ0609TSBBWBC10	PCB171_173	PCB171 & 173	pg/g	16700	J	23
LWG01FZ0609TSBBWBC20	PCB171_173	PCB171 & 173	pg/g	2410	J	23
LWG01FZ0609TSBBWBC30	PCB171_173	PCB171 & 173	pg/g	2650	J	23
LWG01FZ0609TSBCWBC10	PCB171_173	PCB171 & 173	pg/g	719	J	23
LWG01FZ0609TSBCWBC20	PCB171_173	PCB171 & 173	pg/g	1210	J	23
LWG01FZ0609TSCPWBC10	PCB171_173	PCB171 & 173	pg/g	5120	J	23
LWG01FZ0609TSCPWBC20	PCB171_173	PCB171 & 173	pg/g	4780	J	23
LWG01FZ0609TSCPWBC30	PCB171_173	PCB171 & 173	pg/g	15200	J	23
LWG0102R001TSCRWBC00	PCB180_193	PCB180 & 193	pg/g	2780	J	23
LWG0102R001TSSPWBC00	PCB180_193	PCB180 & 193	pg/g	22800	J	23
LWG0103R003TSCRWBC00	PCB180_193	PCB180 & 193	pg/g	16800	J	23
LWG0103R004TSCRWBC00	PCB180_193	PCB180 & 193	pg/g	2090	J	23
LWG0103R004TSSPWBC10	PCB180_193	PCB180 & 193	pg/g	15900	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0103R005TSCRWBC00	PCB180_193	PCB180 & 193	pg/g	44900	J	23
LWG0103R005TSSPWBC00	PCB180_193	PCB180 & 193	pg/g	41400	J	23
LWG0103R014TSSBWBC00	PCB180_193	PCB180 & 193	pg/g	30800	J	23
LWG0104R023TSSBWBC10	PCB180_193	PCB180 & 193	pg/g	46700	J	23
LWG0104R023TSSBWBC20	PCB180_193	PCB180 & 193	pg/g	25900	J	23
LWG0104R023TSSBWBC30	PCB180_193	PCB180 & 193	pg/g	19400	J	23
LWG0105R006TSSBWBC00	PCB180_193	PCB180 & 193	pg/g	22700	J	23
LWG0106R002TSSPWBC10	PCB180_193	PCB180 & 193	pg/g	51800	J	23
LWG0106R002TSSPWBC20	PCB180_193	PCB180 & 193	pg/g	385000	J	23
LWG0106R004TSCRWBC10	PCB180_193	PCB180 & 193	pg/g	1470	J	23
LWG0106R004TSCRWBC20	PCB180_193	PCB180 & 193	pg/g	3850	J	23
LWG0106R004TSSPWBC00	PCB180_193	PCB180 & 193	pg/g	18800	J	23
LWG0106R024TSSBWBC00	PCB180_193	PCB180 & 193	pg/g	32600	J	23
LWG0106R031TSCRWBC00	PCB180_193	PCB180 & 193	pg/g	3530	J	23
LWG0107R006TSCRWBC00	PCB180_193	PCB180 & 193	pg/g	3540	J	23
LWG0107R006TSSPWBC00	PCB180_193	PCB180 & 193	pg/g	22100	J	23
LWG0107R009TSSBWBC10	PCB180_193	PCB180 & 193	pg/g	56200	J	23
LWG0107R009TSSBWBC20	PCB180_193	PCB180 & 193	pg/g	48300	J	23
LWG0107R009TSSBWBC30	PCB180_193	PCB180 & 193	pg/g	33300	J	23
LWG0108R003TSCRWBC00	PCB180_193	PCB180 & 193	pg/g	7660	J	23
LWG0108R003TSSPWBC00	PCB180_193	PCB180 & 193	pg/g	41600	J	23
LWG0108R010TSSBWBC10	PCB180_193	PCB180 & 193	pg/g	536000	J	23
LWG0108R010TSSBWBC20	PCB180_193	PCB180 & 193	pg/g	134000	J	23
LWG0108R010TSSBWBC30	PCB180_193	PCB180 & 193	pg/g	444000	J	23
LWG0108R032TSSBWBC00	PCB180_193	PCB180 & 193	pg/g	61400	J	23
LWG0109R002TSCRWBC00	PCB180_193	PCB180 & 193	pg/g	23800	J	23
LWG0109R002TSSPWBC00	PCB180_193	PCB180 & 193	pg/g	74700	J	23
LWG0109R006TSSBWBC00	PCB180_193	PCB180 & 193	pg/g	44100	J	23
LWG01FZ0306TSBBWBC10	PCB180_193	PCB180 & 193	pg/g	5890	J	23
LWG01FZ0306TSBBWBC20	PCB180_193	PCB180 & 193	pg/g	10600	J	23
LWG01FZ0306TSBBWBC30	PCB180_193	PCB180 & 193	pg/g	22600	J	23
LWG01FZ0306TSBCWBC10	PCB180_193	PCB180 & 193	pg/g	4500	J	23
LWG01FZ0306TSBCWBC20	PCB180_193	PCB180 & 193	pg/g	4360	J	23
LWG01FZ0306TSCPWBC10	PCB180_193	PCB180 & 193	pg/g	29300	J	23
LWG01FZ0306TSCPWBC20	PCB180_193	PCB180 & 193	pg/g	723000	J	23
LWG01FZ0306TSCPWBC30	PCB180_193	PCB180 & 193	pg/g	19000	J	23
LWG01FZ0609TSBBWBC10	PCB180_193	PCB180 & 193	pg/g	294000	J	23
LWG01FZ0609TSBBWBC20	PCB180_193	PCB180 & 193	pg/g	23200	J	23
LWG01FZ0609TSBBWBC30	PCB180_193	PCB180 & 193	pg/g	43700	J	23
LWG01FZ0609TSBCWBC10	PCB180_193	PCB180 & 193	pg/g	6620	J	23
LWG01FZ0609TSBCWBC20	PCB180_193	PCB180 & 193	pg/g	9420	J	23
LWG01FZ0609TSCPWBC10	PCB180_193	PCB180 & 193	pg/g	43400	J	23
LWG01FZ0609TSCPWBC20	PCB180_193	PCB180 & 193	pg/g	41300	J	23
LWG01FZ0609TSCPWBC30	PCB180_193	PCB180 & 193	pg/g	122000	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0102R001TSCRWBC00	PCB183_185	PCB183 & 185	pg/g	432	J	23
LWG0102R001TSSPWBC00	PCB183_185	PCB183 & 185	pg/g	6190	J	23
LWG0103R003TSCRWBC00	PCB183_185	PCB183 & 185	pg/g	1690	J	23
LWG0103R004TSCRWBC00	PCB183_185	PCB183 & 185	pg/g	253	J	23
LWG0103R004TSSPWBC10	PCB183_185	PCB183 & 185	pg/g	4530	J	23
LWG0103R005TSCRWBC00	PCB183_185	PCB183 & 185	pg/g	5770	J	23
LWG0103R005TSSPWBC00	PCB183_185	PCB183 & 185	pg/g	11900	J	23
LWG0103R014TSSBWBC00	PCB183_185	PCB183 & 185	pg/g	9180	J	23
LWG0104R023TSSBWBC10	PCB183_185	PCB183 & 185	pg/g	12600	J	23
LWG0104R023TSSBWBC20	PCB183_185	PCB183 & 185	pg/g	6650	J	23
LWG0104R023TSSBWBC30	PCB183_185	PCB183 & 185	pg/g	5010	J	23
LWG0105R006TSSBWBC00	PCB183_185	PCB183 & 185	pg/g	6110	J	23
LWG0106R002TSSPWBC10	PCB183_185	PCB183 & 185	pg/g	12000	J	23
LWG0106R002TSSPWBC20	PCB183_185	PCB183 & 185	pg/g	110000	J	23
LWG0106R004TSCRWBC10	PCB183_185	PCB183 & 185	pg/g	204	J	23
LWG0106R004TSCRWBC20	PCB183_185	PCB183 & 185	pg/g	199	J	23
LWG0106R004TSSPWBC00	PCB183_185	PCB183 & 185	pg/g	4390	J	23
LWG0106R024TSSBWBC00	PCB183_185	PCB183 & 185	pg/g	6670	J	23
LWG0106R031TSCRWBC00	PCB183_185	PCB183 & 185	pg/g	552	J	23
LWG0107R006TSCRWBC00	PCB183_185	PCB183 & 185	pg/g	442	J	23
LWG0107R006TSSPWBC00	PCB183_185	PCB183 & 185	pg/g	5570	J	23
LWG0107R009TSSBWBC20	PCB183_185	PCB183 & 185	pg/g	11700	J	23
LWG0107R009TSSBWBC30	PCB183_185	PCB183 & 185	pg/g	8720	J	23
LWG0108R003TSCRWBC00	PCB183_185	PCB183 & 185	pg/g	893	J	23
LWG0108R003TSSPWBC00	PCB183_185	PCB183 & 185	pg/g	10800	J	23
LWG0108R010TSSBWBC10	PCB183_185	PCB183 & 185	pg/g	165000	J	23
LWG0108R010TSSBWBC20	PCB183_185	PCB183 & 185	pg/g	35700	J	23
LWG0108R010TSSBWBC30	PCB183_185	PCB183 & 185	pg/g	121000	J	23
LWG0108R032TSSBWBC00	PCB183_185	PCB183 & 185	pg/g	16300	J	23
LWG0109R002TSCRWBC00	PCB183_185	PCB183 & 185	pg/g	1040	J	23
LWG0109R002TSSPWBC00	PCB183_185	PCB183 & 185	pg/g	18400	J	23
LWG0109R006TSSBWBC00	PCB183_185	PCB183 & 185	pg/g	11300	J	23
LWG01FZ0306TSBBWBC10	PCB183_185	PCB183 & 185	pg/g	1410	J	23
LWG01FZ0306TSBBWBC20	PCB183_185	PCB183 & 185	pg/g	3110	J	23
LWG01FZ0306TSBBWBC30	PCB183_185	PCB183 & 185	pg/g	4140	J	23
LWG01FZ0306TSBCWBC10	PCB183_185	PCB183 & 185	pg/g	1520	J	23
LWG01FZ0306TSBCWBC20	PCB183_185	PCB183 & 185	pg/g	1450	J	23
LWG01FZ0306TSCPWBC10	PCB183_185	PCB183 & 185	pg/g	8230	J	23
LWG01FZ0306TSCPWBC20	PCB183_185	PCB183 & 185	pg/g	232000	J	23
LWG01FZ0306TSCPWBC30	PCB183_185	PCB183 & 185	pg/g	5690	J	23
LWG01FZ0609TSBBWBC10	PCB183_185	PCB183 & 185	pg/g	71700	J	23
LWG01FZ0609TSBBWBC20	PCB183_185	PCB183 & 185	pg/g	5840	J	23
LWG01FZ0609TSBBWBC30	PCB183_185	PCB183 & 185	pg/g	8130	J	23
LWG01FZ0609TSBCWBC10	PCB183_185	PCB183 & 185	pg/g	2260	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG01FZ0609TSBCWBC20	PCB183_185	PCB183 & 185	pg/g	3340	J	23
LWG01FZ0609TSCPWBC10	PCB183_185	PCB183 & 185	pg/g	13500	J	23
LWG01FZ0609TSCPWBC20	PCB183_185	PCB183 & 185	pg/g	12700	J	23
LWG0102R001TSCRWBC00	PCB197_200	PCB197 & 200	pg/g	13.8	J	23, L
LWG0102R001TSSPWBC00	PCB197_200	PCB197 & 200	pg/g	149	J	23
LWG0103R003TSCRWBC00	PCB197_200	PCB197 & 200	pg/g	110	J	23
LWG0103R004TSCRWBC00	PCB197_200	PCB197 & 200	pg/g	17.5	J	23, L
LWG0103R004TSSPWBC10	PCB197_200	PCB197 & 200	pg/g	165	J	23
LWG0103R005TSCRWBC00	PCB197_200	PCB197 & 200	pg/g	349	J	23
LWG0103R005TSSPWBC00	PCB197_200	PCB197 & 200	pg/g	303	J	23
LWG0103R014TSSBWBC00	PCB197_200	PCB197 & 200	pg/g	371	J	23
LWG0104R023TSSBWBC10	PCB197_200	PCB197 & 200	pg/g	549	J	23
LWG0104R023TSSBWBC20	PCB197_200	PCB197 & 200	pg/g	278	J	23
LWG0104R023TSSBWBC30	PCB197_200	PCB197 & 200	pg/g	218	J	23
LWG0105R006TSSBWBC00	PCB197_200	PCB197 & 200	pg/g	247	J	23
LWG0106R002TSSPWBC10	PCB197_200	PCB197 & 200	pg/g	344	J	23
LWG0106R002TSSPWBC20	PCB197_200	PCB197 & 200	pg/g	3090	J	23
LWG0106R004TSSPWBC00	PCB197_200	PCB197 & 200	pg/g	146	J	23
LWG0106R024TSSBWBC00	PCB197_200	PCB197 & 200	pg/g	315	J	23
LWG0106R031TSCRWBC00	PCB197_200	PCB197 & 200	pg/g	28.5	J	23, L
LWG0107R006TSCRWBC00	PCB197_200	PCB197 & 200	pg/g	19.9	J	23, L
LWG0107R006TSSPWBC00	PCB197_200	PCB197 & 200	pg/g	230	J	23
LWG0107R009TSSBWBC10	PCB197_200	PCB197 & 200	pg/g	565	J	23
LWG0107R009TSSBWBC20	PCB197_200	PCB197 & 200	pg/g	547	J	23
LWG0107R009TSSBWBC30	PCB197_200	PCB197 & 200	pg/g	320	J	23
LWG0108R003TSCRWBC00	PCB197_200	PCB197 & 200	pg/g	40.2	J	23, L
LWG0108R003TSSPWBC00	PCB197_200	PCB197 & 200	pg/g	323	J	23
LWG0108R010TSSBWBC10	PCB197_200	PCB197 & 200	pg/g	7070	J	23
LWG0108R010TSSBWBC20	PCB197_200	PCB197 & 200	pg/g	1520	J	23
LWG0108R010TSSBWBC30	PCB197_200	PCB197 & 200	pg/g	5760	J	23
LWG0108R032TSSBWBC00	PCB197_200	PCB197 & 200	pg/g	713	J	23
LWG0109R002TSCRWBC00	PCB197_200	PCB197 & 200	pg/g	53.1	J	23, L
LWG0109R002TSSPWBC00	PCB197_200	PCB197 & 200	pg/g	548	J	23
LWG0109R006TSSBWBC00	PCB197_200	PCB197 & 200	pg/g	471	J	23
LWG01FZ0306TSBBWBC10	PCB197_200	PCB197 & 200	pg/g	123	J	23
LWG01FZ0306TSBBWBC20	PCB197_200	PCB197 & 200	pg/g	205	J	23
LWG01FZ0306TSBBWBC30	PCB197_200	PCB197 & 200	pg/g	169	J	23
LWG01FZ0306TSBCWBC10	PCB197_200	PCB197 & 200	pg/g	82.3	J	23
LWG01FZ0306TSBCWBC20	PCB197_200	PCB197 & 200	pg/g	75.4	J	23, L
LWG01FZ0306TSCPWBC10	PCB197_200	PCB197 & 200	pg/g	469	J	23
LWG01FZ0306TSCPWBC20	PCB197_200	PCB197 & 200	pg/g	21600	J	23
LWG01FZ0306TSCPWBC30	PCB197_200	PCB197 & 200	pg/g	428	J	23
LWG01FZ0609TSBBWBC10	PCB197_200	PCB197 & 200	pg/g	3460	J	23
LWG01FZ0609TSBBWBC20	PCB197_200	PCB197 & 200	pg/g	438	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG01FZ0609TSBBWBC30	PCB197_200	PCB197 & 200	pg/g	411	J	23
LWG01FZ0609TSBCWBC10	PCB197_200	PCB197 & 200	pg/g	107	J	23
LWG01FZ0609TSCPWBC10	PCB197_200	PCB197 & 200	pg/g	1070	J	23
LWG01FZ0609TSCPWBC20	PCB197_200	PCB197 & 200	pg/g	1030	J	23
LWG01FZ0609TSCPWBC30	PCB197_200	PCB197 & 200	pg/g	3350	J	23
LWG0102R001TSCRWBC00	PCB198_199	PCB198 & 199	pg/g	222	J	23
LWG0102R001TSSPWBC00	PCB198_199	PCB198 & 199	pg/g	2280	J	23
LWG0103R003TSCRWBC00	PCB198_199	PCB198 & 199	pg/g	2390	J	23
LWG0103R004TSCRWBC00	PCB198_199	PCB198 & 199	pg/g	258	J	23
LWG0103R004TSSPWBC10	PCB198_199	PCB198 & 199	pg/g	2580	J	23
LWG0103R005TSCRWBC00	PCB198_199	PCB198 & 199	pg/g	7550	J	23
LWG0103R005TSSPWBC00	PCB198_199	PCB198 & 199	pg/g	5450	J	23
LWG0103R014TSSBWBC00	PCB198_199	PCB198 & 199	pg/g	4190	J	23
LWG0104R023TSSBWBC10	PCB198_199	PCB198 & 199	pg/g	6450	J	23
LWG0104R023TSSBWBC20	PCB198_199	PCB198 & 199	pg/g	3170	J	23
LWG0104R023TSSBWBC30	PCB198_199	PCB198 & 199	pg/g	2900	J	23
LWG0105R006TSSBWBC00	PCB198_199	PCB198 & 199	pg/g	2910	J	23
LWG0106R002TSSPWBC10	PCB198_199	PCB198 & 199	pg/g	5600	J	23
LWG0106R002TSSPWBC20	PCB198_199	PCB198 & 199	pg/g	53300	J	23
LWG0106R004TSCRWBC10	PCB198_199	PCB198 & 199	pg/g	164	J	23
LWG0106R004TSCRWBC20	PCB198_199	PCB198 & 199	pg/g	360	J	23
LWG0106R004TSSPWBC00	PCB198_199	PCB198 & 199	pg/g	2070	J	23
LWG0106R024TSSBWBC00	PCB198_199	PCB198 & 199	pg/g	4590	J	23
LWG0106R031TSCRWBC00	PCB198_199	PCB198 & 199	pg/g	395	J	23
LWG0107R006TSCRWBC00	PCB198_199	PCB198 & 199	pg/g	372	J	23
LWG0107R006TSSPWBC00	PCB198_199	PCB198 & 199	pg/g	3090	J	23
LWG0107R009TSSBWBC10	PCB198_199	PCB198 & 199	pg/g	7200	J	23
LWG0107R009TSSBWBC20	PCB198_199	PCB198 & 199	pg/g	6320	J	23
LWG0107R009TSSBWBC30	PCB198_199	PCB198 & 199	pg/g	4130	J	23
LWG0108R003TSCRWBC00	PCB198_199	PCB198 & 199	pg/g	909	J	23
LWG0108R003TSSPWBC00	PCB198_199	PCB198 & 199	pg/g	3600	J	23
LWG0108R010TSSBWBC10	PCB198_199	PCB198 & 199	pg/g	65600	J	23
LWG0108R010TSSBWBC20	PCB198_199	PCB198 & 199	pg/g	18800	J	23
LWG0108R010TSSBWBC30	PCB198_199	PCB198 & 199	pg/g	62500	J	23
LWG0108R032TSSBWBC00	PCB198_199	PCB198 & 199	pg/g	8670	J	23
LWG0109R002TSCRWBC00	PCB198_199	PCB198 & 199	pg/g	1230	J	23
LWG0109R002TSSPWBC00	PCB198_199	PCB198 & 199	pg/g	11000	J	23
LWG0109R006TSSBWBC00	PCB198_199	PCB198 & 199	pg/g	5680	J	23
LWG01FZ0306TSBBWBC10	PCB198_199	PCB198 & 199	pg/g	1240	J	23
LWG01FZ0306TSBBWBC20	PCB198_199	PCB198 & 199	pg/g	2100	J	23
LWG01FZ0306TSBBWBC30	PCB198_199	PCB198 & 199	pg/g	3330	J	23
LWG01FZ0306TSBCWBC10	PCB198_199	PCB198 & 199	pg/g	914	J	23
LWG01FZ0306TSBCWBC20	PCB198_199	PCB198 & 199	pg/g	794	J	23
LWG01FZ0306TSCPWBC10	PCB198_199	PCB198 & 199	pg/g	4310	J	23

Table E-24. Qualified Data for PCB Congeners in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG01FZ0306TSCPWBC20	PCB198_199	PCB198 & 199	pg/g	141000	J	23
LWG01FZ0306TSCPWBC30	PCB198_199	PCB198 & 199	pg/g	3830	J	23
LWG01FZ0609TSBBWBC10	PCB198_199	PCB198 & 199	pg/g	33000	J	23
LWG01FZ0609TSBBWBC20	PCB198_199	PCB198 & 199	pg/g	3670	J	23
LWG01FZ0609TSBBWBC30	PCB198_199	PCB198 & 199	pg/g	4860	J	23
LWG01FZ0609TSBCWBC10	PCB198_199	PCB198 & 199	pg/g	1220	J	23
LWG01FZ0609TSCPWBC10	PCB198_199	PCB198 & 199	pg/g	8860	J	23
LWG01FZ0609TSCPWBC20	PCB198_199	PCB198 & 199	pg/g	8260	J	23
LWG01FZ0609TSCPWBC30	PCB198_199	PCB198 & 199	pg/g	22200	J	23

Notes:

[a] Rejected data are not included in this summary.

[b] Qualifiers and data qualifier reason codes are defined in Table X-1.

Table E-25. Qualified Data for Dioxins and Furans in Tissue Samples.

Sample Number	CAS number	Analyte	Units	Result	Qualifiers[a,b]	Qualifier Reason Code[b]
LWG0102R001TSCRWBC00	67562-39-4	Heptachlorodibenzofuran	pg/g	0.19	U	7
LWG0103R014TSSBWBC00	67562-39-4	Heptachlorodibenzofuran	pg/g	0.077	U	7
LWG01FZ0609TSCPWBC10	55673-89-7	Heptachlorodibenzofuran	pg/g	0.294	J	19, L
LWG0102R001TSCRWBC00	70648-26-9	Hexachlorodibenzofuran	pg/g	0.066	U	7
LWG0102R001TSCRWBC00	57117-44-9	Hexachlorodibenzofuran	pg/g	0.038	U	7
LWG0103R003TSCRWBC00	57117-44-9	Hexachlorodibenzofuran	pg/g	0.073	U	7
LWG0103R004TSCRWBC00	57117-44-9	Hexachlorodibenzofuran	pg/g	0.077	U	7
LWG01FZ0306TSBBWBC20	72918-21-9	Hexachlorodibenzofuran	pg/g	0.015	U	7
LWG01FZ0306TSCPWBC30	72918-21-9	Hexachlorodibenzofuran	pg/g	0.012	U	7
LWG01FZ0609TSBBWBC30	72918-21-9	Hexachlorodibenzofuran	pg/g	0.018	U	7
LWG01FZ0609TSBCWBC10	72918-21-9	Hexachlorodibenzofuran	pg/g	0.011	U	7
LWG01FZ0609TSCPWBC30	72918-21-9	Hexachlorodibenzofuran	pg/g	0.018	U	7
LWG0103R014TSSBWBC00	40321-76-4	dioxin	pg/g	0.689	J	19
LWG01FZ0609TSCPWBC10	38998-75-3	Heptachlorodibenzofuran	pg/g	7.13	J	19
LWG0103R014TSSBWBC00	39001-02-0	Octachlorodibenzofuran	pg/g	0.095	U	7
LWG0104R023TSSBWBC10	39001-02-0	Octachlorodibenzofuran	pg/g	0.15	U	7
LWG0104R023TSSBWBC20	39001-02-0	Octachlorodibenzofuran	pg/g	0.13	U	7
LWG0104R023TSSBWBC30	39001-02-0	Octachlorodibenzofuran	pg/g	0.148	U	7
LWG0106R024TSSBWBC00	39001-02-0	Octachlorodibenzofuran	pg/g	0.057	U	7
LWG0108R003TSCRWBC00	39001-02-0	Octachlorodibenzofuran	pg/g	0.307	U	7
LWG0108R010TSSBWBC10	39001-02-0	Octachlorodibenzofuran	pg/g	0.115	U	7
LWG0108R010TSSBWBC20	39001-02-0	Octachlorodibenzofuran	pg/g	0.074	U	7
LWG0109R006TSSBWBC00	39001-02-0	Octachlorodibenzofuran	pg/g	0.1	U	7
LWG01FZ0306TSBBWBC20	39001-02-0	Octachlorodibenzofuran	pg/g	0.181	U	7
LWG01FZ0306TSBCWBC20	39001-02-0	Octachlorodibenzofuran	pg/g	0.128	U	7
LWG01FZ0609TSBBWBC10	39001-02-0	Octachlorodibenzofuran	pg/g	0.121	U	7
LWG01FZ0609TSBBWBC20	39001-02-0	Octachlorodibenzofuran	pg/g	0.05	U	7
LWG01FZ0609TSBBWBC30	39001-02-0	Octachlorodibenzofuran	pg/g	0.163	U	7
LWG01FZ0609TSBCWBC10	39001-02-0	Octachlorodibenzofuran	pg/g	0.093	U	7
LWG01FZ0609TSBCWBC20	39001-02-0	Octachlorodibenzofuran	pg/g	0.085	U	7
LWG0103R014TSSBWBC00	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	0.367	U	7
LWG0104R023TSSBWBC10	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	0.451	U	7
LWG0104R023TSSBWBC20	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	1	U	7
LWG0106R024TSSBWBC00	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	0.454	U	7
LWG0108R010TSSBWBC10	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	0.736	U	7
LWG0108R010TSSBWBC20	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	0.981	U	7
LWG0109R006TSSBWBC00	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	0.897	U	7
LWG01FZ0306TSBCWBC10	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	0.364	U	7
LWG01FZ0306TSBCWBC20	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	0.468	U	7
LWG01FZ0609TSBCWBC20	3268-87-9	Octachlorodibenzo-p-dioxin	pg/g	0.556	U	7
LWG0103R014TSSBWBC00	36088-22-9	Pentachlorodibenzo-p-dioxin	pg/g	0.689	J	19

Notes:

[a] Rejected data are not included in this summary.

[b] Qualifiers and data qualifier reason codes are defined in Table X-1.

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
Conventional Analytes									
Total organic carbon	--	percent	73	0	--	--	NE	0.005	
Total solids	--	percent	73	0	--	--	NE	0.01	
Grain size	--	percent	949	12	0.01	0.01	NE	1	
Metals									
Aluminum	7429-90-5	mg/kg	73	0	--	--	*	5	
Antimony	7440-36-0	mg/kg	23	0	--	--	*	0.2	
Arsenic	7440-38-2	mg/kg	73	0	--	--	*	0.1	
Cadmium	7440-43-9	mg/kg	73	0	--	--	*	0.02	
Chromium	7440-47-3	mg/kg	73	0	--	--	*	0.5	
Copper	7440-50-8	mg/kg	73	0	--	--	*	0.2	
Lead	7439-92-1	mg/kg	73	1	5.3	5.3	*	0.1	
Mercury	7439-97-6	mg/kg	73	51	0.04	0.1	*	0.05	
Nickel	7440-02-0	mg/kg	73	0	--	--	*	1	
Selenium	7782-49-2	mg/kg	73	72	0.2	0.5	*	0.2	
Silver	7440-22-4	mg/kg	73	39	0.02	0.03	*	0.02	
Zinc	7440-66-6	mg/kg	73	0	--	--	*	0.6	
Butyltin Compounds									
Monobutyltin trichloride	1118-46-3	ug/kg	3	0	--	--	*	12	
Dibutyltin dichloride	683-18-1	ug/kg	5	0	--	--	*	12	
Tributyltin chloride	1461-22-9	ug/kg	6	0	--	--	--	--	
Tributyltin ion	36643-28-4	ug/kg	6	0	--	--	0.08	6	
Tetrabutyltin	1461-25-2	ug/kg	6	6	5.8	5.9	*	NE	
PCB Aroclors									
Aroclor 1016	12674-11-2	ug/kg	73	73	3.8	1300	*	5	
Aroclor 1221	11104-28-2	ug/kg	73	73	7.5	2600	*	10	
Aroclor 1232	11141-16-5	ug/kg	73	73	3.8	1300	*	5	
Aroclor 1242	53469-21-9	ug/kg	73	69	3.8	1300	0.004	5	a, b

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
Aroclor 1248	12672-29-6	ug/kg	73	66	3.8	1300	0.004	5	a, b
Aroclor 1254	11097-69-1	ug/kg	73	42	3.8	2200	0.004	5	a, b
Aroclor 1260	11096-82-5	ug/kg	73	45	3.8	1300	0.004	5	a, b
Pesticides									
2,4'-DDD	53-19-0	ug/kg	72	66	0.38	130	*	0.4	
2,4'-DDE	3424-82-6	ug/kg	71	69	0.38	200	*	0.4	
2,4'-DDT	789-02-6	ug/kg	72	67	0.38	130	*	0.4	
4,4'-DDD	72-54-8	ug/kg	73	46	0.38	130	0.083	0.4	a, b
4,4'-DDE	72-55-9	ug/kg	71	50	0.38	130	0.0588	0.4	a, b
4,4'-DDT	50-29-3	ug/kg	72	57	0.38	44	0.0588	0.4	a, b
Aldrin	309-00-2	ug/kg	72	72	0.19	66	0.00038	0.2	a, b
alpha-Endosulfan	959-98-8	ug/kg	72	72	0.19	65	1.7	0.2	c
alpha-Hexachlorocyclohexane	319-84-6	ug/kg	72	72	0.19	65	0.001	0.2	a, b
beta-Endosulfan	33213-65-9	ug/kg	72	68	0.38	130	*	0.4	
beta-Hexachlorocyclohexane	319-85-7	ug/kg	72	72	0.19	74	0.0036	0.2	a, b
cis-Chlordane	5103-71-9	ug/kg	72	71	0.19	65	*	0.2	
cis-Nonachlor	5103-73-1	ug/kg	71	71	0.38	130	*	0.4	
delta-Hexachlorocyclohexane	319-86-8	ug/kg	72	72	0.19	65	*	0.2	
Dieldrin	60-57-1	ug/kg	72	72	0.35	270	0.0004	0.4	a, b
Endosulfan sulfate	1031-07-8	ug/kg	71	71	0.38	130	*	0.4	
Endrin	72-20-8	ug/kg	72	72	0.38	130	0.084	0.4	a, b
Endrin aldehyde	7421-93-4	ug/kg	72	72	0.38	130	*	0.4	
Endrin ketone	53494-70-5	ug/kg	72	72	0.38	130	*	0.4	
gamma-Hexachlorocyclohexane	58-89-9	ug/kg	72	70	0.19	65	0.005	0.2	a, b
Heptachlor	76-44-8	ug/kg	72	72	0.19	65	0.0014	0.2	a, b
Heptachlor epoxide	1024-57-3	ug/kg	72	72	0.19	65	0.0007	0.2	a, b
Methoxychlor	72-43-5	ug/kg	72	72	1.9	650	1.4	2	a, b
Mirex	2385-85-5	ug/kg	72	69	0.38	130	0.056	0.4	a, b

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
Oxychlordane	27304-13-8	ug/kg	72	72	0.38	130	*	0.4	
Toxaphene	8001-35-2	ug/kg	71	71	19	6500	0.0059	100	a, b
trans-Chlordane	5103-74-2	ug/kg	72	71	0.19	230	*	0.2	
trans-Nonachlor	39765-80-5	ug/kg	71	71	0.38	130	*	0.4	
Semivolatile Organic Compounds									
Halogenated Compounds									
1,2-Dichlorobenzene	95-50-1	ug/kg	73	73	2	230	184	20	c
1,3-Dichlorobenzene	541-73-1	ug/kg	73	73	2	230	*	20	
1,4-Dichlorobenzene	106-46-7	ug/kg	73	72	2	230	2	20	a, c
1,2,4-Trichlorobenzene	120-82-1	ug/kg	73	72	10	230	*	20	
Hexachlorobenzene	118-74-1	ug/kg	73	65	0.19	20	0.33	0.2	c
2-Chloronaphthalene	91-58-7	ug/kg	73	73	19	230	*	20	
Hexachloroethane	67-72-1	ug/kg	73	72	1.9	98	2	NE b	a, c
Hexachlorobutadiene	87-68-3	ug/kg	73	72	0.19	39	0.6	0.2	c
Hexachlorocyclopentadiene	77-47-4	ug/kg	73	73	94	1200	*	100	
Bis(2-chloro-1-methylethyl) ether	108-60-1	ug/kg	73	73	19	230	*	20	
Bis(2-chloroethoxy) methane	111-91-1	ug/kg	73	73	19	230	*	20	
Bis(2-chloroethyl) ether	111-44-4	ug/kg	73	73	38	470	*	40	
4-Chlorophenyl phenyl ether	7005-72-3	ug/kg	73	73	19	230	*	20	
4-Bromophenyl phenyl ether	101-55-3	ug/kg	73	73	19	230	*	20	
3,3'-Dichlorobenzidine	91-94-1	ug/kg	73	73	94	1200	*	100	
4-Chloroaniline	106-47-8	ug/kg	73	73	56	700	*	60	
Organonitrogen Compounds									
Nitrobenzene	98-95-3	ug/kg	73	73	19	230	*	20	
Aniline	62-53-3	ug/kg	73	73	19	230	*	20	
2-Nitroaniline	88-74-4	ug/kg	73	73	94	1200	*	100	
3-Nitroaniline	99-09-2	ug/kg	73	73	110	1400	*	120	
4-Nitroaniline	100-01-6	ug/kg	73	73	94	1200	*	100	

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit		Round 1 QAPP		Notes
					Minimum	Maximum	ACG	MRL	
N-Nitrosodimethylamine	62-75-9	ug/kg	73	73	94	1200	0.0073	100	a, b
N-Nitrosodipropylamine	621-64-7	ug/kg	73	73	38	470	0.053	20	a, b
N-Nitrosodiphenylamine	86-30-6	ug/kg	73	73	19	230	*	20	
Azobenzene	103-33-3	ug/kg	73	73	19	230	0.0025	20	a, b
2,4-Dinitrotoluene	121-14-2	ug/kg	73	73	94	1200	*	100	
2,6-Dinitrotoluene	606-20-2	ug/kg	73	73	94	1200	*	100	
Oxygen-Containing Compounds									
Carbazole	86-74-8	ug/kg	73	20	1.9	9.5	6.12	6.7	a, c
Benzoic acid	65-85-0	ug/kg	73	64	190	2300	*	200	
Benzyl alcohol	100-51-6	ug/kg	73	73	94	1200	*	20	
Dibenzofuran	132-64-9	ug/kg	73	32	1.9	9.5	8.2	6.7	c
Isophorone	78-59-1	ug/kg	73	73	19	230	*	20	
Phenols and Substituted Phenols									
Phenol	108-95-2	ug/kg	73	72	38	470	3146	20	
2-Methylphenol	95-48-7	ug/kg	73	73	19	230	*	20	
4-Methylphenol	106-44-5	ug/kg	73	51	19	230	26	20	c
2,4-Dimethylphenol	105-67-9	ug/kg	73	72	56	700	*	20	
2-Chlorophenol	95-57-8	ug/kg	73	73	19	230	26	20	c
2,4-Dichlorophenol	120-83-2	ug/kg	73	73	56	700	16	60	a, b
2,4,5-Trichlorophenol	95-95-4	ug/kg	73	73	94	1200	524	100	c
2,4,6-Trichlorophenol	88-06-2	ug/kg	73	73	94	1200	1.8	100	a, b
2,3,4,5-Tetrachlorophenol	4901-51-3	ug/kg	73	73	94	1200	157	NE b	c
2,3,4,6-Tetrachlorophenol	58-90-2	ug/kg	73	73	94	1200	157	NE b	c
2,3,5,6-Tetrachlorophenol	935-95-5	ug/kg	73	73	94	1200	157	NE b	c
Pentachlorophenol	87-86-5	ug/kg	73	58	9.4	490	0.58	1.7	a, b
4-Chloro-3-methylphenol	59-50-7	ug/kg	73	73	38	470	*	40	
2-Nitrophenol	88-75-5	ug/kg	73	73	94	1200	*	100	
4-Nitrophenol	100-02-7	ug/kg	73	73	94	1200	*	100	

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
2,4-Dinitrophenol	51-28-5	ug/kg	73	73	190	2300	*	200	
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	73	73	190	2300	*	200	
Phthalate Esters									
Dimethyl phthalate	131-11-3	ug/kg	73	73	19	230	20000	20	
Diethyl phthalate	84-66-2	ug/kg	73	72	19	230	*	20	
Dibutyl phthalate	84-74-2	ug/kg	73	59	19	230	204	20	c
Butylbenzyl phthalate	85-68-7	ug/kg	73	57	19	230	400	20	
Di-n-octyl phthalate	117-84-0	ug/kg	73	66	19	230	40.9	20	c
Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	73	17	19	19000	3.4	20	a, b
Polycyclic Aromatic Hydrocarbons									
Naphthalene	91-20-3	ug/kg	73	45	10	120	23	5	c
2-Methylnaphthalene	91-57-6	ug/kg	73	52	19	120	*	20	
Acenaphthylene	208-96-8	ug/kg	73	46	19	120	*	20	
Acenaphthene	83-32-9	ug/kg	73	48	19	79	72	20	c
Fluorene	86-73-7	ug/kg	73	45	19	79	48	20	c
Phenanthrene	85-01-8	ug/kg	73	16	19	20	*	20	
Anthracene	120-12-7	ug/kg	73	36	19	77	360	20	
Fluoranthene	206-44-0	ug/kg	73	10	19	20	48	20	
Pyrene	129-00-0	ug/kg	73	10	19	20	36	20	
Benz(a)anthracene	56-55-3	ug/kg	73	1	1.9	1.9	0.038	6.7	a, b
Chrysene	218-01-9	ug/kg	73	0	--	--	3.8	6.7	
Benzo(b)fluoranthene	205-99-2	ug/kg	73	0	--	--	0.038	6.7	
Benzo(k)fluoranthene	207-08-9	ug/kg	73	0	--	--	0.38	6.7	
Benzo(a)pyrene	50-32-8	ug/kg	73	1	1.9	1.9	0.0038	6.7	a, b
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	73	1	1.9	1.9	0.038	6.7	a, b
Dibenz(a,h)anthracene	53-70-3	ug/kg	73	20	1.9	9.9	0.0038	6.7	a, b
Benzo(g,h,i)perylene	191-24-2	ug/kg	73	0	--	--	*	6.7	

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
Herbicides									
2,4,5-T	93-76-5	ug/kg	73	73	1.5	190	2.8	1.7	c
2,4-D	94-75-7	ug/kg	73	73	6.1	130	2.8	6.6	a, b
2,4-DB	94-82-6	ug/kg	73	73	22	270	2.2	45	a, b
Dalapon	75-99-0	ug/kg	73	73	15	450	*	45	
Dicamba	1918-00-9	ug/kg	73	73	3	16	*	20	
Dichloroprop	120-36-5	ug/kg	73	73	6.2	130	*	10	
Dinoseb	88-85-7	ug/kg	73	73	2.9	20	*	20	
MCPA	94-74-6	ug/kg	73	73	3100	67000	*	10000	
MCPP	93-65-2	ug/kg	73	73	3000	91000	*	10000	
Silvex	93-72-1	ug/kg	73	73	1.5	43	2.2	1.7	c
PCB Congeners									
PCB001	2051-60-7	pg/g	12	0	--	--	--	--	
PCB002	2051-61-8	pg/g	12	0	--	--	--	--	
PCB003	2051-62-9	pg/g	12	0	--	--	--	--	
PCB004	13029-08-8	pg/g	12	0	--	--	--	--	
PCB005	16605-91-7	pg/g	12	0	--	--	--	--	
PCB006	25569-80-6	pg/g	12	0	--	--	--	--	
PCB007	33284-50-3	pg/g	12	1	0.701	0.701	--	--	
PCB008	34883-43-7	pg/g	12	0	--	--	--	--	
PCB009	34883-39-1	pg/g	12	0	--	--	--	--	
PCB010	33146-45-1	pg/g	12	0	--	--	--	--	
PCB011	2050-67-1	pg/g	12	0	--	--	--	--	
PCB012 & 013	--	pg/g	12	0	--	--	--	--	
PCB014	34883-41-5	pg/g	12	7	0.161	3.95	--	--	
PCB015	2050-68-2	pg/g	12	0	--	--	--	--	
PCB016	38444-78-9	pg/g	12	0	--	--	--	--	
PCB017	37680-66-3	pg/g	12	0	--	--	--	--	

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
PCB018 & 030	--	pg/g	12	0	--	--	--	--	
PCB019	38444-73-4	pg/g	12	0	--	--	--	--	
PCB020 & 028	--	pg/g	12	0	--	--	--	--	
PCB021 & 033	--	pg/g	12	0	--	--	--	--	
PCB022	38444-85-8	pg/g	12	0	--	--	--	--	
PCB023	55720-44-0	pg/g	12	2	0.146	0.436	--	--	
PCB024	55702-45-9	pg/g	12	3	0.144	0.169	--	--	
PCB025	55712-37-3	pg/g	12	0	--	--	--	--	
PCB026 & 029	--	pg/g	12	0	--	--	--	--	
PCB027	38444-76-7	pg/g	12	0	--	--	--	--	
PCB031	16606-02-3	pg/g	12	0	--	--	--	--	
PCB032	38444-77-8	pg/g	12	0	--	--	--	--	
PCB034	37680-68-5	pg/g	12	0	--	--	--	--	
PCB035	37680-69-6	pg/g	12	0	--	--	--	--	
PCB036	38444-87-0	pg/g	12	6	0.197	4.64	--	--	
PCB037	38444-90-5	pg/g	12	0	--	--	--	--	
PCB038	53555-66-1	pg/g	12	2	0.201	0.219	--	--	
PCB039	38444-88-1	pg/g	12	0	--	--	--	--	
PCB040 & 041 & 071	--	pg/g	12	0	--	--	--	--	
PCB042	36559-22-5	pg/g	12	0	--	--	--	--	
PCB043	70362-46-8	pg/g	12	0	--	--	--	--	
PCB044 & 047 & 065	--	pg/g	12	0	--	--	--	--	
PCB045 & 051	--	pg/g	12	0	--	--	--	--	
PCB046	41464-47-5	pg/g	12	0	--	--	--	--	
PCB048	70362-47-9	pg/g	12	0	--	--	--	--	
PCB049 & 069	--	pg/g	12	0	--	--	--	--	
PCB050 & 053	--	pg/g	12	0	--	--	--	--	
PCB052	35693-99-3	pg/g	12	0	--	--	--	--	

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
PCB054	15968-05-5	pg/g	12	0	--	--	--	--	
PCB055	74338-24-2	pg/g	12	3	0.496	15.6	--	--	
PCB056	41464-43-1	pg/g	12	0	--	--	--	--	
PCB057	70424-67-8	pg/g	12	1	0.723	0.723	--	--	
PCB058	41464-49-7	pg/g	12	2	0.765	0.776	--	--	
PCB059 & 062 & 075	--	pg/g	12	0	--	--	--	--	
PCB060	33025-41-1	pg/g	12	0	--	--	--	--	
PCB061 & 070 & 074 & 076	--	pg/g	12	0	--	--	--	--	
PCB063	74472-34-7	pg/g	12	0	--	--	--	--	
PCB064	52663-58-8	pg/g	12	0	--	--	--	--	
PCB066	32598-10-0	pg/g	12	0	--	--	--	--	
PCB067	73575-53-8	pg/g	12	0	--	--	--	--	
PCB068	73575-52-7	pg/g	12	0	--	--	--	--	
PCB072	41464-42-0	pg/g	12	0	--	--	--	--	
PCB073	74338-23-1	pg/g	12	7	0.598	14.7	--	--	
PCB077	32598-13-3	pg/g	12	0	--	--	*	0.5-1.0	
PCB078	70362-49-1	pg/g	12	11	0.177	16.4	--	--	
PCB079	41464-48-6	pg/g	12	0	--	--	--	--	
PCB080	33284-52-5	pg/g	12	12	0.535	14.6	--	--	
PCB081	70362-50-4	pg/g	12	0	--	--	--	--	
PCB082	52663-62-4	pg/g	12	0	--	--	--	--	
PCB083 & 099	--	pg/g	12	0	--	--	--	--	
PCB084	52663-60-2	pg/g	12	0	--	--	--	--	
PCB085 & 116 & 117	--	pg/g	12	0	--	--	--	--	
PCB086 & 087 & 097 & 108 & 119 & 125	--	pg/g	12	0	--	--	--	--	
PCB088 & 091	--	pg/g	12	0	--	--	--	--	
PCB089	73575-57-2	pg/g	12	0	--	--	--	--	
PCB090 & 101 & 113	--	pg/g	12	0	--	--	--	--	

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
PCB092	52663-61-3	pg/g	12	0	--	--	--	--	
PCB093 & 095 & 098 & 100 & 102	--	pg/g	12	0	--	--	--	--	
PCB094	73575-55-0	pg/g	12	0	--	--	--	--	
PCB096	73575-54-9	pg/g	12	0	--	--	--	--	
PCB103	60145-21-3	pg/g	12	0	--	--	--	--	
PCB104	56558-16-8	pg/g	12	1	0.21	0.21	--	--	
PCB105	32598-14-4	pg/g	12	0	--	--	*	0.5-1.0	
PCB106	70424-69-0	pg/g	12	9	0.351	15.7	--	--	
PCB107 & 124	--	pg/g	12	0	--	--	--	--	
PCB109	74472-35-8	pg/g	12	0	--	--	--	--	
PCB110 & 115	--	pg/g	12	0	--	--	--	--	
PCB111	39635-32-0	pg/g	12	5	0.331	3.04	--	--	
PCB112	74472-36-9	pg/g	12	10	0.22	11.1	--	--	
PCB114	74472-37-0	pg/g	12	0	--	--	*	0.5-1.0	
PCB118	31508-00-6	pg/g	12	0	--	--	*	0.5-1.0	
PCB120	68194-12-7	pg/g	12	0	--	--	--	--	
PCB121	56558-18-0	pg/g	12	5	0.419	11.5	--	--	
PCB122	76842-07-4	pg/g	12	0	--	--	--	--	
PCB123	65510-44-3	pg/g	12	1	480	480	*	0.5-1.0	a
PCB126	57465-28-8	pg/g	12	0	--	--	0.01	0.5-1.0	
PCB127	39635-33-1	pg/g	12	2	4.12	21.5	--	--	
PCB128 & 166	--	pg/g	12	0	--	--	--	--	
PCB129 & 138 & 160 & 163	--	pg/g	12	0	--	--	--	--	
PCB130	52663-66-8	pg/g	12	1	27.8	27.8	--	--	
PCB131	61798-70-7	pg/g	12	0	--	--	--	--	
PCB132	38380-05-1	pg/g	12	0	--	--	--	--	
PCB133	35694-04-3	pg/g	12	0	--	--	--	--	
PCB134 & 143	--	pg/g	12	0	--	--	--	--	

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
PCB135 & 151 & 154	--	pg/g	12	1	10.1	10.1	--	--	
PCB136	38411-22-2	pg/g	12	0	--	--	--	--	
PCB137	35694-06-5	pg/g	12	1	24.3	24.3	--	--	
PCB139 & 140	--	pg/g	12	0	--	--	--	--	
PCB141	52712-04-6	pg/g	12	0	--	--	--	--	
PCB142	41411-61-4	pg/g	12	10	0.368	8.5	--	--	
PCB144	68194-14-9	pg/g	12	0	--	--	--	--	
PCB145	74472-40-5	pg/g	12	2	0.357	3.28	--	--	
PCB146	51908-16-8	pg/g	12	0	--	--	--	--	
PCB147 & 149	--	pg/g	12	0	--	--	--	--	
PCB148	74472-41-6	pg/g	12	0	--	--	--	--	
PCB150	68194-08-1	pg/g	12	0	--	--	--	--	
PCB152	68194-09-2	pg/g	12	0	--	--	--	--	
PCB153 & 168	--	pg/g	12	0	--	--	--	--	
PCB155	33979-03-2	pg/g	11	3	0.122	2.76	--	--	
PCB156	38380-08-4	pg/g	12	0	--	--	*	0.5-1.0	
PCB157	69782-90-7	pg/g	12	0	--	--	*	0.5-1.0	
PCB158	74472-42-7	pg/g	12	0	--	--	--	--	
PCB159	39635-35-3	pg/g	12	1	0.591	0.591	--	--	
PCB161	74472-43-8	pg/g	12	12	0.394	18	--	--	
PCB162	39635-34-2	pg/g	12	1	5.33	5.33	--	--	
PCB164	74472-45-0	pg/g	12	0	--	--	--	--	
PCB165	74472-46-1	pg/g	12	4	0.524	19.5	--	--	
PCB167	52663-72-6	pg/g	12	0	--	--	*	0.5-1.0	
PCB169	32774-16-6	pg/g	12	2	0.209	0.21	*	0.5-1.0	a
PCB170	35065-30-6	pg/g	12	0	--	--	*	0.5-1.0	
PCB171 & 173	--	pg/g	12	0	--	--	--	--	
PCB172	52663-74-8	pg/g	12	0	--	--	--	--	

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
PCB174	38411-25-5	pg/g	12	0	--	--	--	--	
PCB175	40186-70-7	pg/g	12	0	--	--	--	--	
PCB176	52663-65-7	pg/g	12	0	--	--	--	--	
PCB177	52663-70-4	pg/g	12	0	--	--	--	--	
PCB178	52663-67-9	pg/g	12	0	--	--	--	--	
PCB179	52663-64-6	pg/g	12	0	--	--	--	--	
PCB180 & 193	--	pg/g	12	0	--	--	*	0.5-1.0	
PCB181	74472-47-2	pg/g	12	0	--	--	--	--	
PCB182	60145-23-5	pg/g	12	0	--	--	--	--	
PCB183 & 185	--	pg/g	12	0	--	--	--	--	
PCB184	74472-48-3	pg/g	12	3	0.322	2.96	--	--	
PCB186	74472-49-4	pg/g	12	5	0.304	2.85	--	--	
PCB187	52663-68-0	pg/g	12	0	--	--	--	--	
PCB188	74487-85-7	pg/g	12	1	0.325	0.325	--	--	
PCB189	39635-31-9	pg/g	12	0	--	--	*	0.5-1.0	
PCB190	41411-64-7	pg/g	12	0	--	--	--	--	
PCB191	74472-50-7	pg/g	12	0	--	--	--	--	
PCB192	74472-51-8	pg/g	12	11	0.245	6.56	--	--	
PCB194	35694-08-7	pg/g	12	0	--	--	--	--	
PCB195	52663-78-2	pg/g	12	0	--	--	--	--	
PCB196	42740-50-1	pg/g	12	0	--	--	--	--	
PCB197 & 200	--	pg/g	12	0	--	--	--	--	
PCB198 & 199	--	pg/g	12	0	--	--	--	--	
PCB201	40186-71-8	pg/g	12	0	--	--	--	--	
PCB202	2136-99-4	pg/g	12	0	--	--	--	--	
PCB203	52663-76-0	pg/g	12	0	--	--	--	--	
PCB204	74472-52-9	pg/g	12	5	0.276	6.36	--	--	
PCB205	74472-53-0	pg/g	12	0	--	--	--	--	

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
PCB206	40186-72-9	pg/g	12	0	--	--	--	--	
PCB207	52663-79-3	pg/g	12	0	--	--	--	--	
PCB208	52663-77-1	pg/g	12	0	--	--	--	--	
PCB209	2051-24-3	pg/g	12	0	--	--	--	--	
Volatile Organic Compounds									
1,1,1,2-Tetrachloroethane	630-20-6	ug/kg	1	1	2	2	*	1	
1,1,1-Trichloroethane	71-55-6	ug/kg	1	1	2	2	*	1	
1,1,2,2-Tetrachloroethane	79-34-5	ug/kg	1	1	2	2	*	1	
1,1,2-Trichloro-1,2,2-trifluoroethane	76-13-1	ug/kg	1	1	2	2	--	--	
1,1,2-Trichloroethane	79-00-5	ug/kg	1	1	2	2	*	1	
1,1-Dichloroethane	75-34-3	ug/kg	1	1	2	2	*	1	
1,1-Dichloropropene	563-58-6	ug/kg	1	1	2	2	--	--	
1,2,3-Trichlorobenzene	87-61-6	ug/kg	1	1	10	10	--	--	
1,2,3-Trichloropropane	96-18-4	ug/kg	1	1	4	4	*	3	
1,2-Dibromo-3-chloropropane	96-12-8	ug/kg	1	1	10	10	--	--	
1,2-Dichloroethane	107-06-2	ug/kg	1	1	2	2	*	1	
1,2-Dichloropropane	78-87-5	ug/kg	1	1	2	2	*	1	
1,3,5-Trimethylbenzene	108-67-8	ug/kg	1	1	2	2	--	--	
1,3-Dichloropropane	142-28-9	ug/kg	1	1	2	2	--	--	
1,4-Dichloro-trans-2-butene	110-57-6	ug/kg	1	1	10	10	*	5	
2,2-Dichloropropane	594-20-7	ug/kg	1	1	2	2	--	--	
2-Chloroethyl vinyl ether	110-75-8	ug/kg	1	1	10	10	*	5	
2-Chlorotoluene	95-49-8	ug/kg	1	1	2	2	--	--	
4-Chlorotoluene	106-43-4	ug/kg	1	1	2	2	--	--	
Acetone	67-64-1	ug/kg	1	0	--	--	*	5	
Acrolein	107-02-8	ug/kg	1	1	100	100	*	50	
Acrylonitrile	107-13-1	ug/kg	1	1	10	10	*	5	
Benzene	71-43-2	ug/kg	1	1	0.18	0.18	*	0.11	

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
Bromobenzene	108-86-1	ug/kg	1	1	2	2	--	--	
Bromochloromethane	74-97-5	ug/kg	1	1	2	2	*	1	
Bromodichloromethane	75-27-4	ug/kg	1	1	2	2	*	1	
Bromoethane	74-96-4	ug/kg	1	1	4	4	--	--	
Bromoform	75-25-2	ug/kg	1	1	2	2	*	1	
Bromomethane	74-83-9	ug/kg	1	1	2	2	*	1	
Carbon disulfide	75-15-0	ug/kg	1	1	2	2	*	1	
Carbon tetrachloride	56-23-5	ug/kg	1	1	2	2	*	1	
Chlorobenzene	108-90-7	ug/kg	1	1	2	2	*	1	
Chlorodibromomethane	124-48-1	ug/kg	1	1	2	2	*	1	
Chloroethane	75-00-3	ug/kg	1	1	2	2	*	1	
Chloroform	67-66-3	ug/kg	1	1	2	2	*	1	
Chloromethane	74-87-3	ug/kg	1	1	2	2	*	1	
cis-1,2-Dichloroethene	156-59-2	ug/kg	1	1	2	2	--	--	
cis-1,3-Dichloropropene	10061-01-5	ug/kg	1	1	2	2	*	1	
Dichlorodifluoromethane	75-71-8	ug/kg	1	1	2	2	*	1	
Ethylbenzene	100-41-4	ug/kg	1	1	0.18	0.18	*	0.11	
Ethylene dibromide	106-93-4	ug/kg	1	1	2	2	--	--	
Isopropylbenzene	98-82-8	ug/kg	1	1	2	2	*	10	
m,p-Xylene	179601-23-1	ug/kg	1	1	0.37	0.37	*	0.22	
Methyl iodide	74-88-4	ug/kg	1	1	2	2	*	1	
Methyl isobutyl ketone	108-10-1	ug/kg	1	1	10	10	*	5	
Methyl N-butyl ketone	591-78-6	ug/kg	1	1	10	10	*	5	
Methyl tert-butyl ether	1634-04-4	ug/kg	1	1	0.18	0.18	*	0.11	
Methylene bromide	74-95-3	ug/kg	1	1	2	2	*	1	
Methylene chloride	75-09-2	ug/kg	1	1	4	4	*	2	
Methylethyl ketone	78-93-3	ug/kg	1	1	10	10	*	5	
n-Butylbenzene	104-51-8	ug/kg	1	1	4	4	--	--	

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
n-Propylbenzene	103-65-1	ug/kg	1	1	2	2	--	--	
o-Xylene	95-47-6	ug/kg	1	1	0.18	0.18	*	0.11	
p-Cymene	99-87-6	ug/kg	1	1	2	2	--	--	
Pseudocumene	95-63-6	ug/kg	1	1	2	2	--	--	
Sec-butylbenzene	135-98-8	ug/kg	1	1	2	2	--	--	
Styrene	100-42-5	ug/kg	1	1	2	2	*	1	
tert-Butylbenzene	98-06-6	ug/kg	1	1	2	2	--	--	
Tetrachloroethene	127-18-4	ug/kg	1	1	0.18	0.18	*	0.1	
Toluene	108-88-3	ug/kg	1	1	0.18	0.18	*	0.11	
trans-1,2-Dichloroethene	156-60-5	ug/kg	1	1	2	2	*	0.15	
trans-1,3-Dichloropropene	10061-02-6	ug/kg	1	1	2	2	*	0.11	
Trichloroethene	79-01-6	ug/kg	1	1	0.18	0.18	*	0.1	
Trichlorofluoromethane	75-69-4	ug/kg	1	1	2	2	*	1	
Vinyl acetate	108-05-4	ug/kg	1	1	10	10	*	5	
Vinyl chloride	75-01-4	ug/kg	1	1	0.18	0.18	*	0.1	
Vinylidene chloride	75-35-4	ug/kg	1	1	0.18	0.18	*	0.1	
Chlorinated Dioxins and Furans									
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g	12	2	0.107	0.135	0.0001	0.01	a, b
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g	12	0	--	--	0.001	0.01	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g	12	0	--	--	0.001	0.01	
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g	12	0	--	--	0.001	0.01	
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g	12	0	--	--	0.0002	0.01	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g	12	0	--	--	0.01	0.01	
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g	12	0	--	--	0.01	0.01	
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g	12	0	--	--	0.01	0.01	
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g	12	0	--	--	0.01	0.01	
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g	12	0	--	--	0.01	0.01	
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g	12	3	0.08	0.1	0.01	0.01	b

Table E-26. Reported Detection Limits and Analytical Concentration Goals for Sediment Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g	12	0	--	--	0.01	0.01	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g	12	0	--	--	0.09	0.03	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g	12	0	--	--	0.09	0.03	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g	12	0	--	--	0.09	0.03	
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g	12	0	--	--	9.4	0.05	
Octachlorodibenzofuran	39001-02-0	pg/g	12	0	--	--	9.4	0.05	
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g	12	0	--	--	--	--	
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g	12	0	--	--	--	--	
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g	12	1	2	2	--	--	
Pentachlorodibenzofuran homologs	30402-15-4	pg/g	12	0	--	--	--	--	
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g	12	0	--	--	--	--	
Hexachlorodibenzofuran homologs	55684-94-1	pg/g	12	0	--	--	--	--	
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g	12	0	--	--	--	--	
Heptachlorodibenzofuran homologs	38998-75-3	pg/g	12	0	--	--	--	--	

Notes:

[a] The MRL provided in the Round 1 QAPP is higher than the ACG, and the analyte was not detected in one or more samples.

[b] The lowest reported detection limit is greater than the ACG.

[c] The lowest reported detection limit is less than the ACG, and the highest reported detection limit is greater than the ACG.

Table E-27. Reported Detection Limits and Analytical Concentration Goals for Tissue Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
Conventional Analytes									
Lipids	66455-18-3	percent	129	0	--	--	*	1	
Total solids	--	percent	129	0	--	--	*	0.01	
Metals									
Aluminum	7429-90-5	mg/kg	129	6	0.7	46.5	*	0.1	
Antimony	7440-36-0	mg/kg	129	94	<0.001	0.009	*	0.004	
Arsenic	7440-38-2	mg/kg	129	0	--	--	0.00027	0.1	
Cadmium	7440-43-9	mg/kg	129	10	<0.001	0.003	0.01	0.01	
Chromium	7440-47-3	mg/kg	129	40	0.05	0.09	0.054	0.1	a, c
Copper	7440-50-8	mg/kg	129	0	--	--	0.67	0.02	
Lead	7439-92-1	mg/kg	129	28	0.001	0.365	*	0.004	
Manganese	7439-96-5	mg/kg	129	0	--	--	0.431	0.01	
Mercury	7439-97-6	mg/kg	131	0	--	--	0.005	0.004	
Nickel	7440-02-0	mg/kg	129	18	0.001	0.328	0.36	0.04	
Selenium	7782-49-2	mg/kg	129	108	0.1	0.5	*	0.2	
Silver	7440-22-4	mg/kg	129	95	0.0002	0.0181	0.089	0.004	
Thallium	7440-28-0	mg/kg	129	4	0.0012	0.0018	0.001	0.004	a, b
Zinc	7440-66-6	mg/kg	129	0	--	--	0.00027	0.1	
Butyltin Compounds									
Butyltin ion	78763-54-9	ug/kg	2	0	--	--	*	2	
Dibutyltin ion	14488-53-0	ug/kg	2	0	--	--	*	2	
Tributyltin ion	36643-28-4	ug/kg	2	0	--	--	5.4	2	
Tetrabutyltin	1461-25-2	ug/kg	2	2	0.19	0.19	*	10	
PCB Aroclors									
Aroclor 1016	12674-11-2	ug/kg	129	129	0.95	470	0.21	2	a, b
Aroclor 1221	11104-28-2	ug/kg	129	129	0.95	390	0.21	4	a, b
Aroclor 1232	11141-16-5	ug/kg	129	128	0.95	550	0.21	2	a, b
Aroclor 1242	53469-21-9	ug/kg	129	129	0.95	630	0.21	2	a, b
Aroclor 1248	12672-29-6	ug/kg	129	55	0.95	730	0.21	2	a, b
Aroclor 1254	11097-69-1	ug/kg	129	129	1	5200	0.21	2	a, b
Aroclor 1260	11096-82-5	ug/kg	129	16	1.4	22	0.21	2	a, b
Aroclor 1262	37324-23-5	ug/kg	129	129	0.95	190	--	--	

Table E-27. Reported Detection Limits and Analytical Concentration Goals for Tissue Samples.

			Number of	Number	Reported Detection Limit		Round 1 QAPP		
Analyte	CAS Number	Units	Results	Undetected	Minimum	Maximum	ACG	MRL	Notes
Aroclor 1268	11100-14-4	ug/kg	129	129	0.95	190	--	--	
Pesticides									
2,4'-DDD	53-19-0	ug/kg	135	107	1	12	*	1	
2,4'-DDE	3424-82-6	ug/kg	130	120	1	9.8	*	1	
2,4'-DDT	789-02-6	ug/kg	132	59	1	21	*	1	
4,4'-DDD	72-54-8	ug/kg	163	34	1	9.6	5.4	1	c
4,4'-DDE	72-55-9	ug/kg	173	7	11	34	3.8	1	b
4,4'-DDT	50-29-3	ug/kg	136	56	1	19	3.8	1	c
Aldrin	309-00-2	ug/kg	130	130	1	19	0.025	1	a, b
alpha-Endosulfan	959-98-8	ug/kg	130	126	1	20	108	1	
alpha-Hexachlorocyclohexane	319-84-6	ug/kg	130	129	1	9.8	0.067	1	a, b
beta-Endosulfan	33213-65-9	ug/kg	130	113	1	20	*	1	
beta-Hexachlorocyclohexane	319-85-7	ug/kg	130	116	1	9.8	0.233	1	a, b
cis-Chlordane	5103-71-9	ug/kg	130	99	1	20	*	1	
cis-Nonachlor	5103-73-1	ug/kg	130	130	1	19	*	1	
delta-Hexachlorocyclohexane	319-86-8	ug/kg	130	127	1	9.8	*	1	
Dieldrin	60-57-1	ug/kg	131	107	1	20	0.026	1	a, b
Endosulfan sulfate	1031-07-8	ug/kg	130	127	1	20	*	1	
Endrin	72-20-8	ug/kg	130	125	1	31	5.4	1	c
Endrin aldehyde	7421-93-4	ug/kg	130	127	1	20	*	1	
Endrin ketone	53494-70-5	ug/kg	130	130	1	20	*	1	
gamma-Hexachlorocyclohexane	58-89-9	ug/kg	130	115	1	19	0.322	1	a, b
Heptachlor	76-44-8	ug/kg	130	129	1	13	0.0933	1	a, b
Heptachlor epoxide	1024-57-3	ug/kg	130	124	1	9.8	0.046	1	a, b
Methoxychlor	72-43-5	ug/kg	130	115	1	20	90	1	
Mirex	2385-85-5	ug/kg	130	130	1	9.8	3.6	1	c
Oxychlordane	27304-13-8	ug/kg	130	126	1	32	*	1	
Toxaphene	8001-35-2	ug/kg	130	130	50	6900	0.38	50	a, b
trans-Chlordane	5103-74-2	ug/kg	130	116	1	9.8	*	1	
trans-Nonachlor	39765-80-5	ug/kg	130	98	1	19	*	1	
Semivolatile Organic Compounds									
Halogenated Compounds									

Table E-27. Reported Detection Limits and Analytical Concentration Goals for Tissue Samples.

			Number of	Number	Reported Detection Limit		Round 1 QAPP		
Analyte	**CAS Number**	**Units**	**Results**	**Undetected**	**Minimum**	**Maximum**	**ACG**	**MRL**	**Notes**
1,2-Dichlorobenzene	95-50-1	ug/kg	100	100	17	96	1620	12.5	
1,3-Dichlorobenzene	541-73-1	ug/kg	100	100	17	66	*	12.5	
1,4-Dichlorobenzene	106-46-7	ug/kg	100	100	17	66	17	12.5	c
1,2,4-Trichlorobenzene	120-82-1	ug/kg	100	100	17	37	*	12.5	
Hexachlorobenzene	118-74-1	ug/kg	130	123	1	33	0.26	1	a, b
2-Chloronaphthalene	91-58-7	ug/kg	100	100	17	66	*	200	
Hexachloroethane	67-72-1	ug/kg	130	128	1	37	18	1	c
Hexachlorobutadiene	87-68-3	ug/kg	130	126	1	33	5.4	1	c
Hexachlorocyclopentadiene	77-47-4	ug/kg	100	100	630	1600	*	500	
Bis(2-chloro-1-methylethyl) ether	108-60-1	ug/kg	100	100	130	330	*	300	
Bis(2-chloroethoxy) methane	111-91-1	ug/kg	100	100	130	330	*	100	
Bis(2-chloroethyl) ether	111-44-4	ug/kg	100	100	17	95	*	12.5	
4-Chlorophenyl phenyl ether	7005-72-3	ug/kg	100	100	42	93	*	12.5	
4-Bromophenyl phenyl ether	101-55-3	ug/kg	100	100	17	37	*	12.5	
3,3'-Dichlorobenzidine	91-94-1	ug/kg	100	100	1300	3300	*	500	
4-Chloroaniline	106-47-8	ug/kg	100	100	83	190	*	600	
Organonitrogen Compounds									
Nitrobenzene	98-95-3	ug/kg	100	100	17	37	*	12.5	
Aniline	62-53-3	ug/kg	56	56	1500	1900	*	200	
2-Nitroaniline	88-74-4	ug/kg	100	100	630	1600	*	500	
3-Nitroaniline	99-09-2	ug/kg	100	100	630	1600	*	500	
4-Nitroaniline	100-01-6	ug/kg	100	100	630	1600	*	500	
N-Nitrosodimethylamine	62-75-9	ug/kg	100	100	130	780	0.025	400	a, b
N-Nitrosodipropylamine	621-64-7	ug/kg	100	100	17	37	0.18	1000	a, b
N-Nitrosodiphenylamine	86-30-6	ug/kg	100	100	130	330	*	200	
1,2-Diphenylhydrazine	122-66-7	ug/kg	100	100	17	37	0.16	12.5	a, b
Azobenzene	103-33-3	ug/kg	100	100	130	330	0.16	12.5	a, b
2,4-Dinitrotoluene	121-14-2	ug/kg	100	100	25	85	*	12.5	
2,6-Dinitrotoluene	606-20-2	ug/kg	100	100	17	37	*	12.5	
Oxygen-Containing Compounds									
Carbazole	86-74-8	ug/kg	100	100	17	37	21	12.5	c
Benzoic acid	65-85-0	ug/kg	59	59	7600	9400	72000	1000	

Table E-27. Reported Detection Limits and Analytical Concentration Goals for Tissue Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
Benzyl alcohol	100-51-6	ug/kg	100	99	250	660	5400	600	
Dibenzofuran	132-64-9	ug/kg	100	97	17	80	72	12.5	c
Isophorone	78-59-1	ug/kg	59	59	1500	1900	*	200	
Phenols and Substituted Phenols									
Phenol	108-95-2	ug/kg	100	98	250	660	10800	300	
2-Methylphenol	95-48-7	ug/kg	100	100	130	330	*	600	
4-Methylphenol	106-44-5	ug/kg	100	97	17	130	90	200	a, c
2,4-Dimethylphenol	105-67-9	ug/kg	100	100	380	990	*	200	
2-Chlorophenol	95-57-8	ug/kg	100	100	25	67	90	200	a
2,4-Dichlorophenol	120-83-2	ug/kg	100	100	17	41	54	600	a
2,4,5-Trichlorophenol	95-95-4	ug/kg	100	100	630	1600	1800	500	
2,4,6-Trichlorophenol	88-06-2	ug/kg	100	100	17	52	117	1000	a
2,3,4,5-Tetrachlorophenol	4901-51-3	ug/kg	100	100	1300	3300	540	NE	a, b
2,3,5,6-Tetrachlorophenol	935-95-5	ug/kg	100	100	1300	3300	540	NE	a, b
Pentachlorophenol	87-86-5	ug/kg	100	99	130	190	3.5	1000	a, b
4-Chloro-3-methylphenol	59-50-7	ug/kg	100	100	250	660	*	200	
2-Nitrophenol	88-75-5	ug/kg	59	59	1500	1900	*	500	
4-Nitrophenol	100-02-7	ug/kg	100	100	1300	3300	*	600	
2,4-Dinitrophenol	51-28-5	ug/kg	64	64	2500	6600	*	1000	
4,6-Dinitro-2-methylphenol	534-52-1	ug/kg	100	100	2500	6600	*	1000	
Phthalate Esters									
Dimethyl phthalate	131-11-3	ug/kg	100	100	130	330	180000	200	
Diethyl phthalate	84-66-2	ug/kg	100	100	130	1600	*	200	
Dibutyl phthalate	84-74-2	ug/kg	100	100	250	660	1800	200	
Butylbenzyl phthalate	85-68-7	ug/kg	100	100	250	3700	3600	200	c
Di-n-octyl phthalate	117-84-0	ug/kg	100	96	250	1300	360	200	c
Bis(2-ethylhexyl) phthalate	117-81-7	ug/kg	100	91	78	1300	30	200	a, b
Polycyclic Aromatic Hydrocarbons									
Naphthalene	91-20-3	ug/kg	100	93	17	82	16	12.5	b
2-Methylnaphthalene	91-57-6	ug/kg	100	94	17	73	*	12.5	
Acenaphthylene	208-96-8	ug/kg	100	100	17	90	*	12.5	
Acenaphthene	83-32-9	ug/kg	100	84	26	100	1080	12.5	

Table E-27. Reported Detection Limits and Analytical Concentration Goals for Tissue Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
Fluorene	86-73-7	ug/kg	100	93	17	87	720	12.5	
Phenanthrene	85-01-8	ug/kg	100	94	17	96	*	12.5	
Anthracene	120-12-7	ug/kg	100	100	17	93	5400	12.5	
Fluoranthene	206-44-0	ug/kg	100	91	17	110	720	12.5	
Pyrene	129-00-0	ug/kg	100	94	17	64	540	12.5	
Benz(a)anthracene	56-55-3	ug/kg	100	98	17	76	0.575	12.5	a, b
Chrysene	218-01-9	ug/kg	100	98	17	80	58	12.5	c
Benzo(b)fluoranthene	205-99-2	ug/kg	100	100	17	63	0.575	12.5	a, b
Benzo(k)fluoranthene	207-08-9	ug/kg	100	100	17	77	5.75	12.5	a, b
Benzo(a)pyrene	50-32-8	ug/kg	100	100	17	80	0.0575	12.5	a, b
Indeno(1,2,3-cd)pyrene	193-39-5	ug/kg	100	100	17	37	0.575	12.5	a, b
Dibenz(a,h)anthracene	53-70-3	ug/kg	100	100	17	37	0.0575	12.5	a, b
Benzo(g,h,i)perylene	191-24-2	ug/kg	100	100	17	160	*	12.5	
PCB Congeners									
PCB001	2051-60-7	pg/g	36	5	2.19	4.04	--	--	
PCB002	2051-61-8	pg/g	36	20	1.72	3.41	--	--	
PCB003	2051-62-9	pg/g	36	13	2.51	4.89	--	--	
PCB004	13029-08-8	pg/g	49	4	12.6	12.8	--	--	
PCB005	16605-91-7	pg/g	49	29	1.99	5.8	--	--	
PCB006	25569-80-6	pg/g	49	5	3.57	6.6	--	--	
PCB007	33284-50-3	pg/g	49	19	3.16	7.02	--	--	
PCB008	34883-43-7	pg/g	49	4	9.45	9.61	--	--	
PCB009	34883-39-1	pg/g	49	6	2.51	4.64	--	--	
PCB010	33146-45-1	pg/g	49	14	4.02	8.93	--	--	
PCB011	2050-67-1	pg/g	49	11	23.2	42.8	--	--	
PCB012 & 013	--	pg/g	49	23	4.46	9.9	--	--	
PCB014	34883-41-5	pg/g	49	49	0.375	5.81	--	--	
PCB015	2050-68-2	pg/g	49	0	--	--	--	--	
PCB016	38444-78-9	pg/g	49	3	8.34	8.48	--	--	
PCB017	37680-66-3	pg/g	49	3	6.76	6.87	--	--	
PCB018 & 030	--	pg/g	49	2	15.4	15.5	--	--	
PCB019	38444-73-4	pg/g	49	4	7.05	7.17	--	--	

Table E-27. Reported Detection Limits and Analytical Concentration Goals for Tissue Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
PCB020 & 028	--	pg/g	49	0	--	--	--	--	
PCB021 & 033	--	pg/g	49	4	6.51	11.9	--	--	
PCB022	38444-85-8	pg/g	49	4	4.2	7.78	--	--	
PCB023	55720-44-0	pg/g	49	35	3.24	7.19	--	--	
PCB024	55702-45-9	pg/g	49	14	4.18	9.3	--	--	
PCB025	55712-37-3	pg/g	49	4	3.08	5.7	--	--	
PCB026 & 029	--	pg/g	49	2	16.6	16.7	--	--	
PCB027	38444-76-7	pg/g	49	5	3.79	7.02	--	--	
PCB031	16606-02-3	pg/g	49	1	11.2	11.2	--	--	
PCB032	38444-77-8	pg/g	49	3	7.27	7.39	--	--	
PCB034	37680-68-5	pg/g	49	7	3.18	5.88	--	--	
PCB035	37680-69-6	pg/g	49	37	0.401	5.62	--	--	
PCB036	38444-87-0	pg/g	49	39	0.395	7.28	--	--	
PCB037	38444-90-5	pg/g	49	0	--	--	--	--	
PCB038	53555-66-1	pg/g	49	23	2.77	5.41	--	--	
PCB039	38444-88-1	pg/g	49	12	3.36	7.14	--	--	
PCB040 & 041 & 071	--	pg/g	49	3	17.8	18.1	--	--	
PCB042	36559-22-5	pg/g	49	3	11	11.2	--	--	
PCB043	70362-46-8	pg/g	49	7	7.48	13.9	--	--	
PCB044 & 047 & 065	--	pg/g	49	1	44.5	44.5	--	--	
PCB045 & 051	--	pg/g	49	4	11.8	21.9	--	--	
PCB046	41464-47-5	pg/g	49	7	5.11	9.46	--	--	
PCB048	70362-47-9	pg/g	49	4	8.28	15.1	--	--	
PCB049 & 069	--	pg/g	49	1	19.6	19.6	--	--	
PCB050 & 053	--	pg/g	49	5	11.9	22	--	--	
PCB052	35693-99-3	pg/g	49	0	--	--	--	--	
PCB054	15968-05-5	pg/g	49	9	4.32	8.01	--	--	
PCB055	74338-24-2	pg/g	49	45	0.966	11	--	--	
PCB056	41464-43-1	pg/g	49	3	6.45	6.56	--	--	
PCB057	70424-67-8	pg/g	49	6	4.95	9.02	--	--	
PCB058	41464-49-7	pg/g	49	18	5.68	11.1	--	--	
PCB059 & 062 & 075	--	pg/g	49	6	10.9	20.2	--	--	

Table E-27. Reported Detection Limits and Analytical Concentration Goals for Tissue Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
PCB060	33025-41-1	pg/g	49	0	--	--	--	--	
PCB061 & 070 & 074 & 076	--	pg/g	49	0	--	--	--	--	
PCB063	74472-34-7	pg/g	49	0	--	--	--	--	
PCB064	52663-58-8	pg/g	49	2	9.23	9.3	--	--	
PCB066	32598-10-0	pg/g	49	0	--	--	--	--	
PCB067	73575-53-8	pg/g	49	6	7.09	12.9	--	--	
PCB068	73575-52-7	pg/g	49	2	9.36	9.45	--	--	
PCB072	41464-42-0	pg/g	49	5	9.61	9.77	--	--	
PCB073	74338-23-1	pg/g	49	35	0.61	11.6	--	--	
PCB077	32598-13-3	pg/g	49	0	--	--	*	0.11	
PCB078	70362-49-1	pg/g	49	39	0.953	11.3	--	--	
PCB079	41464-48-6	pg/g	49	3	2.77	5	--	--	
PCB080	33284-52-5	pg/g	49	49	1.22	11.2	--	--	
PCB081	70362-50-4	pg/g	49	0	--	--	--	--	
PCB082	52663-62-4	pg/g	49	5	5.81	10.6	--	--	
PCB083 & 099	--	pg/g	49	0	--	--	--	--	
PCB084	52663-60-2	pg/g	49	3	16.8	17.1	--	--	
PCB085 & 116 & 117	--	pg/g	49	0	--	--	--	--	
PCB086 & 087 & 097 & 108 & 119 & 125	--	pg/g	49	1	30.2	30.2	--	--	
PCB088 & 091	--	pg/g	49	3	15.9	16.2	--	--	
PCB089	73575-57-2	pg/g	49	10	4.8	8.89	--	--	
PCB090 & 101 & 113	--	pg/g	49	0	--	--	--	--	
PCB092	52663-61-3	pg/g	49	1	10.4	10.4	--	--	
PCB093 & 095 & 098 & 100 & 102	--	pg/g	49	1	41.1	41.1	--	--	
PCB094	73575-55-0	pg/g	49	10	4.88	9.03	--	--	
PCB096	73575-54-9	pg/g	49	10	6.4	11.9	--	--	
PCB103	60145-21-3	pg/g	49	4	4.51	8.33	--	--	
PCB104	56558-16-8	pg/g	49	21	6.15	13.7	--	--	
PCB105	32598-14-4	pg/g	49	0	--	--	*	0.07	
PCB106	70424-69-0	pg/g	49	47	1.43	22.5	--	--	
PCB107 & 124	--	pg/g	49	6	19.4	35.3	--	--	
PCB109	74472-35-8	pg/g	49	0	--	--	--	--	

Table E-27. Reported Detection Limits and Analytical Concentration Goals for Tissue Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
PCB110 & 115	--	pg/g	49	0	--	--	--	--	
PCB111	39635-32-0	pg/g	49	10	5.61	10.4	--	--	
PCB112	74472-36-9	pg/g	49	46	0.842	12.8	--	--	
PCB114	74472-37-0	pg/g	49	0	--	--	*	0.06	
PCB118	31508-00-6	pg/g	49	0	--	--	*	0.08	
PCB120	68194-12-7	pg/g	49	1	7.29	7.29	--	--	
PCB121	56558-18-0	pg/g	49	11	4.06	7.52	--	--	
PCB122	76842-07-4	pg/g	49	8	11.7	21.5	--	--	
PCB123	65510-44-3	pg/g	49	0	--	--	*	0.18	
PCB126	57465-28-8	pg/g	49	0	--	--	0.03	0.07	
PCB127	39635-33-1	pg/g	49	15	1.95	17.6	--	--	
PCB128 & 166	--	pg/g	49	1	13.3	13.3	--	--	
PCB129 & 138 & 160 & 163	--	pg/g	49	0	--	--	--	--	
PCB130	52663-66-8	pg/g	49	0	--	--	--	--	
PCB131	61798-70-7	pg/g	49	8	6.08	11.3	--	--	
PCB132	38380-05-1	pg/g	49	0	--	--	--	--	
PCB133	35694-04-3	pg/g	49	0	--	--	--	--	
PCB134 & 143	--	pg/g	49	8	9.6	19.1	--	--	
PCB135 & 151 & 154	--	pg/g	49	1	30.2	30.2	--	--	
PCB136	38411-22-2	pg/g	49	0	--	--	--	--	
PCB137	35694-06-5	pg/g	49	0	--	--	--	--	
PCB139 & 140	--	pg/g	49	6	8.6	15.7	--	--	
PCB141	52712-04-6	pg/g	49	3	8.37	15.4	--	--	
PCB142	41411-61-4	pg/g	49	46	1.34	131	--	--	
PCB144	68194-14-9	pg/g	49	1	8.24	8.24	--	--	
PCB145	74472-40-5	pg/g	49	25	2.23	4.36	--	--	
PCB146	51908-16-8	pg/g	49	0	--	--	--	--	
PCB147 & 149	--	pg/g	49	0	--	--	--	--	
PCB148	74472-41-6	pg/g	49	8	4.82	8.92	--	--	
PCB150	68194-08-1	pg/g	49	8	2.15	3.99	--	--	
PCB152	68194-09-2	pg/g	49	12	5.68	10.5	--	--	
PCB153 & 168	--	pg/g	49	0	--	--	--	--	

Table E-27. Reported Detection Limits and Analytical Concentration Goals for Tissue Samples.

					Reported Detection Limit		Round 1 QAPP		
Analyte	CAS Number	Units	Number of Results	Number Undetected	Minimum	Maximum	ACG	MRL	Notes
PCB155	33979-03-2	pg/g	49	15	4.31	7.98	--	--	
PCB156	38380-08-4	pg/g	49	0	--	--	*	0.11	
PCB157	69782-90-7	pg/g	49	0	--	--	*	0.11	
PCB158	74472-42-7	pg/g	49	1	8.88	8.88	--	--	
PCB159	39635-35-3	pg/g	49	7	5.28	9.74	--	--	
PCB161	74472-43-8	pg/g	49	49	0.905	132	--	--	
PCB162	39635-34-2	pg/g	49	4	8.07	14.7	--	--	
PCB164	74472-45-0	pg/g	49	1	12	12	--	--	
PCB165	74472-46-1	pg/g	49	10	5.5	10.1	--	--	
PCB167	52663-72-6	pg/g	49	0	--	--	*	0.06	
PCB169	32774-16-6	pg/g	49	8	0.722	0.926	*	0.11	
PCB170	35065-30-6	pg/g	49	0	--	--	*	0.1	
PCB171 & 173	--	pg/g	49	1	27.7	27.7	--	--	
PCB172	52663-74-8	pg/g	49	0	--	--	--	--	
PCB174	38411-25-5	pg/g	49	0	--	--	--	--	
PCB175	40186-70-7	pg/g	49	2	19.1	19.2	--	--	
PCB176	52663-65-7	pg/g	49	1	6.9	6.9	--	--	
PCB177	52663-70-4	pg/g	49	0	--	--	--	--	
PCB178	52663-67-9	pg/g	49	0	--	--	--	--	
PCB179	52663-64-6	pg/g	49	1	11.8	11.8	--	--	
PCB180 & 193	--	pg/g	49	0	--	--	*	0.14	
PCB181	74472-47-2	pg/g	49	2	13.4	13.5	--	--	
PCB182	60145-23-5	pg/g	49	11	7.95	14.7	--	--	
PCB183 & 185	--	pg/g	49	0	--	--	--	--	
PCB184	74472-48-3	pg/g	49	24	6.46	13	--	--	
PCB186	74472-49-4	pg/g	49	46	0.48	7.48	--	--	
PCB187	52663-68-0	pg/g	49	0	--	--	--	--	
PCB188	74487-85-7	pg/g	49	14	7.63	14.1	--	--	
PCB189	39635-31-9	pg/g	49	0	--	--	*	0.07	
PCB190	41411-64-7	pg/g	49	0	--	--	--	--	
PCB191	74472-50-7	pg/g	49	0	--	--	--	--	
PCB192	74472-51-8	pg/g	49	49	0.52	6.75	--	--	

Table E-27. Reported Detection Limits and Analytical Concentration Goals for Tissue Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
PCB194	35694-08-7	pg/g	49	0	--	--	--	--	
PCB195	52663-78-2	pg/g	49	0	--	--	--	--	
PCB196	42740-50-1	pg/g	49	0	--	--	--	--	
PCB197 & 200	--	pg/g	49	2	18.8	19	--	--	
PCB198 & 199	--	pg/g	49	0	--	--	--	--	
PCB201	40186-71-8	pg/g	49	0	--	--	--	--	
PCB202	2136-99-4	pg/g	49	1	18.2	18.2	--	--	
PCB203	52663-76-0	pg/g	49	0	--	--	--	--	
PCB204	74472-52-9	pg/g	49	40	8.03	17.8	--	--	
PCB205	74472-53-0	pg/g	49	5	10.5	19.4	--	--	
PCB206	40186-72-9	pg/g	49	0	--	--	--	--	
PCB207	52663-79-3	pg/g	49	1	11.5	11.5	--	--	
PCB208	52663-77-1	pg/g	49	0	--	--	--	--	
PCB209	2051-24-3	pg/g	49	0	--	--	--	--	
Chlorinated Dioxins and Furans									
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1746-01-6	pg/g	49	0	--	--	0.0028	0.005	
2,3,7,8-Tetrachlorodibenzofuran	51207-31-9	pg/g	49	0	--	--	0.028	0.01	
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	40321-76-4	pg/g	49	0	--	--	0.0028	0.008	
1,2,3,7,8-Pentachlorodibenzofuran	57117-41-6	pg/g	49	0	--	--	0.056	0.009	
2,3,4,7,8-Pentachlorodibenzofuran	57117-31-4	pg/g	49	0	--	--	0.0056	0.008	
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	39227-28-6	pg/g	49	1	0.075	0.075	0.028	0.007	b
1,2,3,4,7,8-Hexachlorodibenzofuran	70648-26-9	pg/g	49	1	0.066	0.066	0.028	0.009	b
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	57653-85-7	pg/g	49	0	--	--	0.028	0.013	
1,2,3,6,7,8-Hexachlorodibenzofuran	57117-44-9	pg/g	49	3	0.038	0.077	0.028	0.007	b
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	19408-74-3	pg/g	49	0	--	--	0.028	0.015	
1,2,3,7,8,9-Hexachlorodibenzofuran	72918-21-9	pg/g	49	31	0.011	0.041	0.028	0.011	c
2,3,4,6,7,8-Hexachlorodibenzofuran	60851-34-5	pg/g	49	0	--	--	0.028	0.008	
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	35822-46-9	pg/g	49	0	--	--	0.028	0.017	
1,2,3,4,6,7,8-Heptachlorodibenzofuran	67562-39-4	pg/g	49	2	0.077	0.19	0.28	0.016	
1,2,3,4,7,8,9-Heptachlorodibenzofuran	55673-89-7	pg/g	49	11	0.016	0.06	0.28	0.012	
Octachlorodibenzo-p-dioxin	3268-87-9	pg/g	49	10	0.364	1	2.8	0.017	
Octachlorodibenzofuran	39001-02-0	pg/g	49	19	0.046	0.307	2.8	0.046	

Table E-27. Reported Detection Limits and Analytical Concentration Goals for Tissue Samples.

Analyte	CAS Number	Units	Number of Results	Number Undetected	Reported Detection Limit Minimum	Reported Detection Limit Maximum	Round 1 QAPP ACG	Round 1 QAPP MRL	Notes
Tetrachlorodibenzo-p-dioxin homologs	41903-57-5	pg/g	49	0	--	--	--	--	
Tetrachlorodibenzofuran homologs	30402-14-3	pg/g	49	0	--	--	--	--	
Pentachlorodibenzo-p-dioxin homologs	36088-22-9	pg/g	49	0	--	--	--	--	
Pentachlorodibenzofuran homologs	30402-15-4	pg/g	49	0	--	--	--	--	
Hexachlorodibenzo-p-dioxin homologs	34465-46-8	pg/g	49	0	--	--	--	--	
Hexachlorodibenzofuran homologs	55684-94-1	pg/g	49	0	--	--	--	--	
Heptachlorodibenzo-p-dioxin homologs	37871-00-4	pg/g	49	0	--	--	--	--	
Heptachlorodibenzofuran homologs	38998-75-3	pg/g	49	1	0.016	0.016	--	--	

Notes:

[a] The MRL provided in the Round 1 QAPP is higher than the ACG, and the analyte was not detected in one or more samples.

[b] The lowest RDL is greater than the ACG.

[c] The lowest RDL is less than the ACG, and the highest reported detection limit is greater than the ACG.

Table E-28a. Results for Field Replicates and Split Samples

	LWG0103R003SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
Conventional Analytes (percent)						
Total solids	68.9	69	71.2	**2**	69.6	**2**
Total organic carbon	0.9	1.1	1.1	**11**	1.2	**-9**
Gravel	0.62	3.42	1.34	**81**	1.74	**-26**
Very coarse sand	0.72	0.49	0.25	**48**	1.43	**-140**
Coarse sand	6.26	4.15	3.45	**32**	24.1	**-150**
Medium sand	39.6	33.3	41	**11**	64.1	**-44**
Fine sand	26	34	35.4	**16**	5.51	**146**
Very fine sand	10.5	10.5	6.35	**26**	0.67	**162**
Coarse silt	5.16	5	2.88	**29**	0.26	**167**
Medium silt	3.7	2.8	2.92	**16**	0.69	**124**
Fine silt	1.62	2.04	2.26	**16**	0.57	**119**
Very fine silt	2.19	1.33	1.38	**30**	0.4	**110**
8-9 Phi clay	1.29	1.1	1.05	**11**	0.27	**118**
9-10 Phi clay	1.05	0.96	0.87	**9**	0.17	**135**
>10 Phi clay	1.27	0.91	0.9	**21**	0.12	**153**
Metals (mg/kg)						
Aluminum	20700	24400	18600	**14**	20300	**-9**
Antimony		0.3 J				
Arsenic	4.1	4.5	6.4	**25**	3.3	**64**
Cadmium	0.1	0.14	0.11	**18**	0.08	**32**
Chromium	21.6	27	21.2	**14**	22.2	**-5**
Copper	20.2	23.7	19.4	**11**	20	**-3**
Lead	11	12	12	**5**	14	**-15**
Mercury	0.06 U	0.07 U	0.06 U	--	0.07 U	--
Nickel	21	26	21	**13**	22	**-5**
Selenium	0.3 UJ	0.3 U	0.3 U	--	0.3 UJ	--
Silver	0.03 UJ	0.03 U	0.03 UJ	--	0.03 U	--
Zinc	76.4	89	67.6	**14**	73.7	**-9**
Aroclor 1016	3.8 U	3.9 U	3.9 U	--	4 U	--
Aroclor 1242	3.8 U	3.9 U	3.9 U	--	4 U	--
Aroclor 1248	3.8 U	3.9 U	3.9 U	--	4 U	--
Aroclor 1254	6.6 U	6.8	6.8 U	**2**	4 U	**52**
Aroclor 1260	6.8	9	8.7 U	**15**	7.2	**19**
Aroclor 1221	7.6 U	7.9 U	7.8 U	--	7.9 U	--
Aroclor 1232	3.8 U	3.9 U	3.9 U	--	4 U	--
Pesticides (ug/kg)						
2,4'-DDD	0.39 U	0.41 U	0.39 U	--	0.4 U	--
2,4'-DDE	2.6 U	2.1 U	1.8 U	--	0.4 U	--
2,4'-DDT	0.38 U	0.39 U	0.39 U	--	0.4 U	--
4,4'-DDD	0.93	0.93	1	**4**	0.96	**4**
4,4'-DDE	0.86	0.84	0.94	**6**	0.76	**21**
4,4'-DDT	3.3	1.7 U	2.8	**31**	1.6 U	**55**
Aldrin	0.19 U	0.2 U	0.2 U	--	0.2 U	--
alpha-Hexachlorocyclohexane	0.19 U	0.2 U	0.2 U	--	0.2 U	--

Table E-28a. Results for Field Replicates and Split Samples

	LWG0103R003SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
beta-Hexachlorocyclohexane	0.28 U	1.2 U	0.41 U	--	0.2 U	--
delta-Hexachlorocyclohexane	0.19 U	0.2 U	0.2 U	--	0.2 U	--
gamma-Hexachlorocyclohexane	0.19 U	0.2 U	0.2 U	--	0.2 U	--
cis-Chlordane	0.19 U	0.2 U	0.2 U	--	0.2 U	--
trans-Chlordane	0.19 U	0.2 U	0.2 U	--	0.2 U	--
Oxychlordane	0.38 U	0.39 U	0.39 U	--	0.4 U	--
cis-Nonachlor	0.38 U	0.39 U	0.39 U	--	0.4 U	--
trans-Nonachlor	0.38 U	0.39 U	0.39 U	--	0.4 U	--
Dieldrin	0.38 U	0.39 U	0.39 U	--	0.4 U	--
alpha-Endosulfan	0.19 U	0.2 U	0.2 U	--	0.2 U	--
beta-Endosulfan	0.38 U	0.39 U	0.39 U	--	0.4 U	--
Endosulfan sulfate	0.38 U	0.39 U	0.39 U	--	0.4 U	--
Endrin	0.38 U	0.39 U	0.39 U	--	0.4 U	--
Endrin aldehyde	0.38 U	0.39 U	0.39 U	--	0.4 U	--
Endrin ketone	0.68 UJ	0.78 UJ	1.3 UJ	--	0.4 U	--
Heptachlor	0.19 U	0.2 U	0.2 U	--	0.2 U	--
Heptachlor epoxide	0.19 U	0.2 U	0.2 U	--	0.2 U	--
Methoxychlor	1.9 U	2 U	2 U	--	2 U	--
Mirex	0.38 U	0.39 U	0.39 U	--	0.4 U	--
Toxaphene	19 U	20 U	20 U	--	20 U	--
Semivolatile Organic Compounds (ug/kg)						
1,2,4-Trichlorobenzene	58 U	19 U	20 U	--	19 U	--
1,2-Dichlorobenzene	58 U	19 U	20 U	--	19 U	--
1,3-Dichlorobenzene	58 U	19 U	20 U	--	19 U	--
1,4-Dichlorobenzene	58 U	19 U	20 U	--	19 U	--
Azobenzene	58 U	19 U	20 U	--	19 U	--
Bis(2-chloro-1-methylethyl) ether	58 U	19 U	20 U	--	19 U	--
2,4-Dinitrotoluene	290 U	97 U	98 U	--	97 U	--
2,6-Dinitrotoluene	290 U	97 U	98 U	--	97 U	--
2-Chloronaphthalene	58 U	19 U	20 U	--	19 U	--
2-Nitroaniline	290 U	97 U	98 U	--	97 U	--
3,3'-Dichlorobenzidine	290 U	97 U	98 U	--	97 U	--
3-Nitroaniline	350 U	120 U	120 U	--	120 U	--
4-Bromophenyl phenyl ether	58 U	19 U	20 U	--	19 U	--
4-Chloroaniline	170 U	58 U	59 U	--	58 U	--
4-Chlorophenyl phenyl ether	58 U	19 U	20 U	--	19 U	--
4-Nitroaniline	290 U	97 U	98 U	--	97 U	--
Aniline	58 U	19 U	20 U	--	19 U	--
Benzoic acid	580 U	190 U	200 U	--	190 U	--
Benzyl alcohol	290 U	97 U	98 U	--	97 U	--
Bis(2-chloroethoxy) methane	58 U	19 U	20 U	--	19 U	--
Bis(2-chloroethyl) ether	120 U	39 U	39 U	--	39 U	--
Carbazole	13	14	8.8	**23**	5.8 U	**41**
Dibenzofuran	5.8 U	5.8 U	5.9 U	--	5.8 U	--
Hexachlorobenzene	0.19 U	0.2 U	0.2 U	--	0.2 U	--

Table E-28a. Results for Field Replicates and Split Samples

	LWG0103R003SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
Hexachlorobutadiene	0.62 U	0.74 U	0.22 U	--	0.34 U	--
Hexachlorocyclopentadiene	290 U	97 U	98 U	--	97 U	--
Hexachloroethane	5.8 U	5.8 U	5.9 U	--	5.8 U	--
Isophorone	58 U	19 U	20 U	--	19 U	--
Nitrobenzene	58 U	19 U	20 U	--	19 U	--
N-Nitrosodimethylamine	290 UJ	97 U	98 UJ	--	97 UJ	--
N-Nitrosodipropylamine	120 U	39 U	39 U	--	39 U	--
N-Nitrosodiphenylamine	58 U	19 U	20 U	--	19 U	--
2,3,4,6-Tetrachlorophenol	290 U	97 U	98 U	--	97 U	--
2,4,5-Trichlorophenol	290 U	97 U	98 U	--	97 U	--
2,4,6-Trichlorophenol	290 U	97 U	98 U	--	97 U	--
2,4-Dichlorophenol	170 U	58 U	59 U	--	58 U	--
2,4-Dimethylphenol	170 U	58 U	59 U	--	58 U	--
2,4-Dinitrophenol	580 U	190 U	200 U	--	190 U	--
2-Chlorophenol	58 U	19 U	20 U	--	19 U	--
2-Methylphenol	58 U	19 U	20 U	--	19 U	--
2-Nitrophenol	290 U	97 U	98 U	--	97 U	--
4,6-Dinitro-2-methylphenol	580 U	190 U	200 U	--	190 U	--
4-Chloro-3-methylphenol	120 U	39 U	39 U	--	39 U	--
4-Methylphenol	58 U	19 U	20 U	--	19 U	--
4-Nitrophenol	290 U	97 U	98 U	--	97 U	--
Pentachlorophenol	29 U	29 U	29 U	--	29 U	--
Phenol	120 U	39 U	39 U	--	39 U	--
2,3,4,5-Tetrachlorophenol	290 U	97 U	98 U	--	97 U	--
2,3,5,6-Tetrachlorophenol	290 U	97 U	98 U	--	97 U	--
Dimethyl phthalate	58 U	19 U	20 U	--	19 U	--
Diethyl phthalate	58 U	19 U	20 U	--	19 U	--
Dibutyl phthalate	58 U	19 U	20 U	--	19 U	--
Butylbenzyl phthalate	100	37	36	**64**	19 U	**62**
Di-n-octyl phthalate	58 U	19 U	20 U	--	19 U	--
Bis(2-ethylhexyl) phthalate	97 U	60 U	48 U	--	38 U	--
2-Methylnaphthalene	58 U	19 U	20 U	--	19 U	--
Acenaphthene	58 U	19 U	20 U	--	19 U	--
Acenaphthylene	58 U	22	20 U	**64**	19 U	--
Anthracene	58 U	46	20 U	**47**	19 U	--
Fluorene	58 U	19 U	20 U	--	19 U	--
Naphthalene	58 U	19 U	20 U	--	19 U	--
Phenanthrene	82	180	73	**53**	58	**23**
Dibenz(a,h)anthracene	25 J	30 J	18 J	**25**	17 J	**6**
Benz(a)anthracene	72	110	45	**43**	61	**-30**
Benzo(a)pyrene	110	130	58	**37**	85	**-38**
Benzo(b)fluoranthene	110	120	59	**34**	78	**-28**
Benzo(g,h,i)perylene	65	55	28	**39**	40	**-35**
Benzo(k)fluoranthene	96	110	67	**24**	63	**6**
Chrysene	150	160	83	**32**	94	**-12**

Table E-28a. Results for Field Replicates and Split Samples

	LWG0103R003SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
Fluoranthene	180	240	120	**33**	140	**-15**
Indeno(1,2,3-cd)pyrene	170	95	77	**43**	81	**-5**
Pyrene	250	350	150	**40**	230	**-42**
Herbicides (ug/kg)						
Dalapon	17 U	41 U	16 U	--	21 U	--
Dicamba	3.3 U	3.1 U	3.3 U	--	3.2 U	--
MCPA	32000 U	67000 U	24000 U	--	3200 U	--
Dichloroprop	6.7 U	6.2 U	6.5 U	--	6.3 U	--
2,4-D	6.7 U	10 U	6.5 U	--	6.3 U	--
Silvex	1.7 U	23 U	4.2 U	--	21 U	--
2,4,5-T	110 U	32 U	6.4 U	--	1.6 U	--
2,4-DB	33 U	31 U	33 U	--	32 U	--
Dinoseb	3.3 U	3.1 U	3.3 U	--	3.2 U	--
MCPP	4600 U	13000 U	3300 U	--	3400 U	--

Table E-28b. Results for Field Replicates and Split Samples

	LWG0103R004SDS015-					
Sample ID	-C11	-C12		-C20	-C30	
Sample Type Code	Sample	Field Split	**RPD**	Field Rep 1	Field Rep 2	**RSD**
Conventional Analytes (percent)						
Total solids	62.1	62.2	**<1**	69.2	66.5	**5**
Total organic carbon	1.3	1.4	**-7**	1.3	1.5	**8**
Gravel	2.96	2.1	**34**	4.73	6.96	**41**
Very coarse sand	1.93	1.4	**32**	2.43	1.8	**16**
Coarse sand	10.8	10.1	**7**	15	12.9	**16**
Medium sand	30.2	29.1	**4**	46.8	40.6	**21**
Fine sand	8.4	8.41	**<1**	9.68	7.45	**13**
Very fine sand	12.4	12.9	**-4**	7.65	7.31	**31**
Coarse silt	10.6	11.7	**-10**	4.52	8.99	**39**
Medium silt	7.88	8.69	**-10**	3.07	5.8	**43**
Fine silt	5.46	5.46	**<1**	1.91	2.88	**54**
Very fine silt	3.56	3.64	**-2**	1.36	1.91	**50**
8-9 Phi clay	2.05	2.26	**-10**	1.02	1.29	**37**
9-10 Phi clay	1.64	2.01	**-20**	0.87	0.99	**36**
>10 Phi clay	2.3	2.27	**1**	0.96	1.14	**50**
Metals (mg/kg)						
Aluminum	25000	24400	**2**	17000	19100	**20**
Arsenic	3.6	3.5	**3**	3.2	3.2	**7**
Cadmium	0.33	0.38	**-14**	0.35	0.25	**17**
Chromium	26.9	25.3	**6**	20.4	22	**15**
Copper	33.4	32.5	**3**	23.2	44.9	**32**
Lead	25	23	**8**	23	22	**7**
Mercury	0.09	0.08	**12**	0.05 U	0.06 U	**31**
Nickel	28	23	**20**	19	20	**22**
Selenium	0.3 UJ	0.3 UJ	**--**	0.3 UJ	0.3 UJ	**--**
Silver	0.09 J	0.07 J	**25**	0.07 J	0.06 J	**21**
Zinc	141	152	**-8**	127	134	**5**
Butyltin Compounds (ug/kg)						
Tributyltin ion	20.5	57	**-94**	22.3	27.6	**16**
Monobutyltin trichloride	28 J		**100**	9.6 J	8.2 J	**72**
Dibutyltin dichloride	56 J	12 J	**129**	32 J	34 J	**33**
Tributyltin chloride	23	64	**-94**	25	31	**16**
Tetrabutyltin	5.8 U	5.9 U	**--**	5.8 U	5.9 U	**--**
PCB Aroclors (ug/kg)						
Aroclor 1016	20 U	20 U	**--**	3.9 U	3.9 U	**--**
Aroclor 1242	200	240	**-18**	150	54	**55**
Aroclor 1248	20 U	20 U	**--**	3.9 U	3.9 U	**--**
Aroclor 1254	73	83	**-13**	64	34	**36**
Aroclor 1260	49	46	**6**	45	34	**18**
Aroclor 1221	39 U	39 U	**--**	7.7 U	7.9 U	**--**
Aroclor 1232	20 U	20 U	**--**	3.9 U	3.9 U	**--**
Pesticides (ug/kg)						
2,4'-DDD	1.1 UJ	1.2 UJ	**--**	1.5 U	0.54 U	**--**
2,4'-DDE	5.5 U	32 U	**--**	3.9 U	2.3 U	**--**

Table E-28b. Results for Field Replicates and Split Samples

	LWG0103R004SDS015-					
Sample ID	-C11	-C12		-C20	-C30	
Sample Type Code	Sample	Field Split	**RPD**	Field Rep 1	Field Rep 2	**RSD**
2,4'-DDT	0.65 U	0.39 U	--	0.53 U	0.41 U	--
4,4'-DDD	3.1 UJ	5.3 UJ	--	1.8 U	1.3 U	--
4,4'-DDE	4.8 UJ	6.3 UJ	--	3.1 U	2.1 U	--
4,4'-DDT	7.4 U	7.7 U	--	6.5 U	4.7 U	--
Aldrin	0.2 U	3.2 U	--	0.19 U	0.2 U	--
alpha-Hexachlorocyclohexane	0.2 U	1.1 U	--	0.19 U	0.2 U	--
beta-Hexachlorocyclohexane	2.8 U	3.4 U	--	2.3 U	1 U	--
delta-Hexachlorocyclohexane	0.2 UJ	0.2 UJ	--	0.19 U	0.2 U	--
gamma-Hexachlorocyclohexane	0.32 U	0.51 U	--	0.32 U	0.2 U	--
cis-Chlordane	0.54 U	0.78 U	--	0.32 U	0.25 U	--
trans-Chlordane	0.99 U	0.2 U	--	0.75 U	0.45 U	--
Oxychlordane	2.9 U	3.1 U	--	2.2 U	1 U	--
cis-Nonachlor	1.8 U	0.39 U	--	1.4 U	1 U	--
trans-Nonachlor	0.39 U	0.39 U	--	0.39 U	0.39 U	--
Dieldrin	3.4 U	1.2 U	--	2.8 U	1.7 U	--
alpha-Endosulfan	0.2 U	1.6 U	--	0.19 U	0.2 U	--
beta-Endosulfan	0.39 U	0.39 U	--	0.39 U	0.39 U	--
Endosulfan sulfate	0.39 UJ	0.39 UJ	--	0.39 U	0.39 U	--
Endrin	0.39 U	0.39 U	--	0.39 U	0.39 U	--
Endrin aldehyde	1.9 U	4 U	--	1.3 U	0.39 U	--
Endrin ketone	1.8 UJ	11 UJ	--	0.39 UJ	0.39 UJ	--
Heptachlor	0.2 U	0.2 U	--	0.19 U	0.2 U	--
Heptachlor epoxide	0.2 U	0.2 U	--	0.19 U	0.2 U	--
Methoxychlor	2 U	39 U	--	1.9 U	2 U	--
Mirex	1.4 U	0.39 U	--	0.89 U	0.79 U	--
Toxaphene	20 U	360 U	--	19 U	20 U	--
Semivolatile Organic Compounds (ug/kg)						
1,2,4-Trichlorobenzene	19 U	19 U	--	20 U	20 U	--
1,2-Dichlorobenzene	19 U	19 U	--	20 U	20 U	--
1,3-Dichlorobenzene	19 U	19 U	--	20 U	20 U	--
1,4-Dichlorobenzene	19 U	19 U	--	20 U	20 U	--
Azobenzene	19 U	19 U	--	20 U	20 U	--
Bis(2-chloro-1-methylethyl) ether	19 U	19 U	--	20 U	20 U	--
2,4-Dinitrotoluene	96 U	96 U	--	98 U	98 U	--
2,6-Dinitrotoluene	96 U	96 U	--	98 U	98 U	--
2-Chloronaphthalene	19 U	19 U	--	20 U	20 U	--
2-Nitroaniline	96 U	96 U	--	98 U	98 U	--
3,3'-Dichlorobenzidine	96 UJ	96 UJ	--	98 UJ	98 UJ	--
3-Nitroaniline	120 U	120 U	--	120 U	120 U	--
4-Bromophenyl phenyl ether	19 U	19 U	--	20 U	20 U	--
4-Chloroaniline	58 U	58 U	--	59 U	59 U	--
4-Chlorophenyl phenyl ether	19 U	19 U	--	20 U	20 U	--
4-Nitroaniline	96 U	96 U	--	98 U	98 U	--
Aniline	19 U	19 U	--	20 U	20 U	--
Benzoic acid	190 U	190 U	--	200 U	200 U	--

Table E-28b. Results for Field Replicates and Split Samples

	LWG0103R004SDS015-					
Sample ID	-C11	-C12		-C20	-C30	
Sample Type Code	Sample	Field Split	**RPD**	Field Rep 1	Field Rep 2	**RSD**
Benzyl alcohol	96 U	96 U	--	98 U	98 U	--
Bis(2-chloroethoxy) methane	19 U	19 U	--	20 U	20 U	--
Bis(2-chloroethyl) ether	39 U	39 U	--	39 U	39 U	--
Carbazole	17	16	**6**	20	12	**25**
Dibenzofuran	9.8	11	**-12**	7	5.9 U	**27**
Hexachlorobenzene	1.2 U	1.5 U	--	0.94 U	0.24 U	--
Hexachlorobutadiene	0.3 U	0.24 U	--	0.3 U	0.43 U	--
Hexachlorocyclopentadiene	96 U	96 U	--	98 U	98 U	--
Hexachloroethane	5.8 U	5.8 U	--	5.9 U	5.9 U	--
Isophorone	19 U	19 U	--	20 U	20 U	--
Nitrobenzene	19 U	19 U	--	20 U	20 U	--
N-Nitrosodimethylamine	96 U	96 U	--	98 U	98 U	--
N-Nitrosodipropylamine	39 U	39 U	--	39 U	39 U	--
N-Nitrosodiphenylamine	19 U	19 U	--	20 U	20 U	--
2,3,4,6-Tetrachlorophenol	96 U	96 U	--	98 U	98 U	--
2,4,5-Trichlorophenol	96 U	96 U	--	98 U	98 U	--
2,4,6-Trichlorophenol	96 U	96 U	--	98 U	98 U	--
2,4-Dichlorophenol	58 U	58 U	--	59 U	59 U	--
2,4-Dimethylphenol	58 U	58 U	--	59 U	59 U	--
2,4-Dinitrophenol	190 U	190 U	--	200 U	200 U	--
2-Chlorophenol	19 U	19 U	--	20 U	20 U	--
2-Methylphenol	19 U	19 U	--	20 U	20 U	--
2-Nitrophenol	96 U	96 U	--	98 U	98 U	--
4,6-Dinitro-2-methylphenol	190 U	190 U	--	200 U	200 U	--
4-Chloro-3-methylphenol	39 U	39 U	--	39 U	39 U	--
4-Methylphenol	19 U	19 U	--	20 U	20 U	--
4-Nitrophenol	96 UJ	96 UJ	--	98 UJ	98 UJ	--
Pentachlorophenol	29 U	29 U	--	52 J	60	**34**
Phenol	39 U	39 U	--	39 U	39 U	--
2,3,4,5-Tetrachlorophenol	96 U	96 U	--	98 U	98 U	--
2,3,5,6-Tetrachlorophenol	96 U	96 U	--	98 U	98 U	--
Dimethyl phthalate	19 U	19 U	--	20 U	20 U	--
Dicthyl phthalatc	19 U	19 U	--	20 U	20 U	--
Dibutyl phthalate	61	27	**77**	20 U	20 U	--
Butylbenzyl phthalate	280	180	**43**	200	120	**40**
Di-n-octyl phthalate	39	53	**-30**	26	24	**27**
Bis(2-ethylhexyl) phthalate	7200	7100	**1**	9700	19000 U	**52**
2-Methylnaphthalene	19 U	19 U	--	20 U	20 U	--
Acenaphthene	41	31	**28**	20 U	20 U	**45**
Acenaphthylene	19 U	19 U	--	20 U	20 U	--
Anthracene	48	47	**2**	42	22	**36**
Fluorene	23	24	**-4**	20 U	20 U	**8**
Naphthalene	19 U	19 U	--	20 U	20 U	--
Phenanthrene	160	160	**<1**	110	69	**40**
Dibenz(a,h)anthracene	46 J	34 J	**30**	25 J	14 J	**57**

Table E-28b. Results for Field Replicates and Split Samples

	LWG0103R004SDS015-					
Sample ID	-C11	-C12		-C20	-C30	
Sample Type Code	Sample	Field Split	**RPD**	Field Rep 1	Field Rep 2	**RSD**
Benz(a)anthracene	150	110	**31**	78	60	**50**
Benzo(a)pyrene	170 J	110 J	**43**	89	79	**44**
Benzo(b)fluoranthene	200 J	160 J	**22**	120	100	**38**
Benzo(g,h,i)perylene	36 J	25 J	**36**	23	24	**26**
Benzo(k)fluoranthene	230 J	140 J	**49**	100	77	**61**
Chrysene	180	140	**25**	100	93	**39**
Fluoranthene	290	240	**19**	170	120	**45**
Indeno(1,2,3-cd)pyrene	46 J	31 J	**39**	28	30	**28**
Pyrene	310	230	**30**	170	130	**46**
Herbicides (ug/kg)						
Dalapon	16 U	16 U	--	16 U	16 U	--
Dicamba	3.1 U	3.2 U	--	3.1 U	3.3 U	--
MCPA	3100 U	3200 U	--	3100 U	3300 U	--
Dichloroprop	6.2 U	6.5 U	--	62 U	6.5 U	--
2,4-D	6.2 U	6.5 U	--	6.2 U	6.5 U	--
Silvex	1.6 U	1.6 U	--	1.6 U	1.6 U	--
2,4,5-T	1.6 U	1.6 U	--	1.6 U	1.6 U	--
2,4-DB	31 U	32 U	--	31 U	33 U	--
Dinoseb	3.1 U	3.2 U	--	3.1 U	3.3 U	--
MCPP	4300 U	3200 U	--	5100 U	3300 U	--

Table E-28c. Results for Field Replicates and Split Samples

	LWG0106R002SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
Conventional Analytes (percent)						
Total solids	65.7	63	67.2	**3**	63.4	**6**
Total organic carbon	2.4	2.8	2.8	**9**	3	**-7**
Gravel	4.37	3.04	1.82	**41**	2.36	**-26**
Very coarse sand	3.53	2.69	2.36	**21**	2.52	**-7**
Coarse sand	18.7	17.4	15.8	**8**	15.9	**-1**
Medium sand	41.8	47.7	49.9	**9**	49.4	**1**
Fine sand	12.3	15.8	18.4	**20**	18.3	**1**
Very fine sand	4.39	3.47	3.16	**17**	3.19	**-1**
Coarse silt	3.08	2.98	1.86	**26**	2.04	**-9**
Medium silt	4.37	2.25	1.94	**46**	1.63	**17**
Fine silt	2.78	1.52	1.51	**38**	1.45	**4**
Very fine silt	2.2	1.35	1.41	**29**	1.6	**-13**
8-9 Phi clay	1.01	0.92	0.97	**5**	0.79	**20**
9-10 Phi clay	0.77	0.49	0.47	**29**	0.46	**2**
>10 Phi clay	0.71	0.32	0.4	**43**	0.41	**-2**
Metals (mg/kg)						
Aluminum	19200	18700	17300	**5**	17600	**-2**
Antimony					1 J	
Arsenic	5.1	3.3	3.9	**22**	3.5	**11**
Cadmium	0.14	0.13	0.17	**14**	0.25	**-38**
Chromium	22	22	19.2	**8**	37	**-63**
Copper	50.7	38.1	46.9	**14**	81.2	**-54**
Lead	37 J	57 J	53 J	**22**	61 J	**-14**
Mercury	0.81 J	0.64 J	0.69 J	**12**	1.19 J	**-53**
Nickel	20	20	20	**<1**	45	**-77**
Selenium	0.3 U	0.3 U	0.3 U	**--**	0.3 U	**--**
Silver	0.03 U	0.03 U	0.03 U	**--**	0.03 U	**--**
Zinc	109	104	101	**4**	96	**5**
PCB Aroclors (ug/kg)						
Aroclor 1016	3.8 U	3.9 U	3.9 U	**--**	3.9 U	**--**
Aroclor 1242	3.8 U	3.9 U	3.9 U	**--**	3.9 U	**--**
Aroclor 1248	3.8 U	3.9 U	3.9 U	**--**	3.9 U	**--**
Aroclor 1254	22 U	20 U	31 U	**--**	24 U	**--**
Aroclor 1260	75 U	3.9 U	94 U	**--**	3.9 U	**--**
Aroclor 1221	7.7 U	7.8 U	7.9 U	**--**	7.8 U	**--**
Aroclor 1232	3.8 U	3.9 U	3.9 U	**--**	3.9 U	**--**
Pesticides (ug/kg)						
2,4'-DDD	0.84 U	0.87 U	1.1 U	**--**	1.1 U	**--**
2,4'-DDE	5.5 U	3.2 U	3.9 U	**--**	3 U	**--**
2,4'-DDT	0.92 U	0.39 U	0.39 UJ	**--**	0.39 UJ	**--**
4,4'-DDD	2.4 U	2.5 U	2.6 UJ	**--**	3.1 UJ	**--**
4,4'-DDE	2.1 U	1.6 U	1.3 U	**--**	1.5 U	**--**
4,4'-DDT	8.9 U	3.8 U	9.1 U	**--**	5.8 U	**--**
Aldrin	0.19 U	0.2 U	0.2 U	**--**	0.2 U	**--**

Table E-28c. Results for Field Replicates and Split Samples

	LWG0106R002SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
alpha-Hexachlorocyclohexane	0.19 U	0.2 U	0.2 U	--	0.2 U	--
beta-Hexachlorocyclohexane	1.1 U	0.2 U	1.3 U	--	1 U	--
delta-Hexachlorocyclohexane	0.19 U	0.2 U	0.2 U	--	0.2 U	--
gamma-Hexachlorocyclohexane	0.19 U	0.2 U	0.2 U	--	0.2 U	--
cis-Chlordane	0.19 U	0.2 U	0.2 U	--	0.2 U	--
trans-Chlordane	0.63 U	0.48 U	0.53 U	--	0.43 U	--
Oxychlordane	0.64 U	0.39 U	0.39 U	--	0.39 U	--
cis-Nonachlor	2.3 U	1.1 U	2.9 U	--	1.4 U	--
trans-Nonachlor	0.38 U	0.39 U	0.39 U	--	0.39 U	--
Dieldrin	0.7 U	0.73 U	0.65 U	--	1.1 U	--
alpha-Endosulfan	0.19 U	0.2 U	0.2 U	--	0.22 U	--
beta-Endosulfan	12	23	13	**38**	40	**-102**
Endosulfan sulfate	0.38 U	0.39 U	0.39 U	--	0.39 U	--
Endrin	0.38 U	0.39 U	0.39 U	--	0.39 U	--
Endrin aldehyde	2.6 U	0.39 U	3.1 U	--	1.6 U	--
Endrin ketone	2.9 U	1.5 U	3.4 U	--	2.6 U	--
Heptachlor	0.19 U	0.2 U	0.2 U	--	0.2 U	--
Heptachlor epoxide	0.19 U	0.2 U	0.2 U	--	0.2 U	--
Methoxychlor	18 U	25 U	16 U	--	44 U	--
Mirex	0.38 U	0.39 U	0.39 U	--	0.39 U	--
Toxaphene	46 U	34 U	59 U	--	65 U	--
Semivolatile Organic Compounds (ug/kg)						
1,2,4-Trichlorobenzene	19 UJ	20 UJ	20 UJ	--	19 UJ	--
1,2-Dichlorobenzene	19 U	20 U	20 U	--	19 U	--
1,3-Dichlorobenzene	19 U	20 U	20 U	--	19 U	--
1,4-Dichlorobenzene	19 UJ	20 UJ	20 UJ	--	19 UJ	--
Azobenzene	19 U	20 U	20 U	--	19 U	--
Bis(2-chloro-1-methylethyl) ether	19 U	20 U	20 U	--	19 U	--
2,4-Dinitrotoluene	97 UJ	98 UJ	98 UJ	--	97 UJ	--
2,6-Dinitrotoluene	97 U	98 U	98 U	--	97 U	--
2-Chloronaphthalene	19 U	20 U	20 U	--	19 U	--
2-Nitroaniline	97 U	98 U	98 U	--	97 U	--
3,3'-Dichlorobenzidine	97 U	98 U	98 U	--	97 U	--
3-Nitroaniline	120 U	120 U	120 U	--	120 U	--
4-Bromophenyl phenyl ether	19 U	20 U	20 U	--	19 U	--
4-Chloroaniline	58 U	59 U	59 U	--	58 U	--
4-Chlorophenyl phenyl ether	19 U	20 U	20 U	--	19 U	--
4-Nitroaniline	97 U	98 U	98 U	--	97 U	--
Aniline	19 U	20 U	20 U	--	19 U	--
Benzoic acid	190 U	220 J	240	**12**	210	**13**
Benzyl alcohol	97 U	98 U	98 U	--	97 U	--
Bis(2-chloroethoxy) methane	19 U	20 U	20 U	--	19 U	--
Bis(2-chloroethyl) ether	39 U	39 U	39 U	--	39 U	--
Carbazole	16	51	22	**63**	21	**5**
Dibenzofuran	34	44	26	**26**	23	**12**

Table E-28c. Results for Field Replicates and Split Samples

	LWG0106R002SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
Hexachlorobenzene	0.19 U	0.27 U	0.2 U	--	0.2 U	--
Hexachlorobutadiene	0.19 U	0.3 U	0.26 U	--	0.24 U	--
Hexachlorocyclopentadiene	97 U	98 UJ	98 U	--	97 U	--
Hexachloroethane	9.7 U	5.9 U	5.9 U	--	5.8 U	--
Isophorone	19 U	20 U	20 U	--	19 U	--
Nitrobenzene	19 U	20 U	20 U	--	19 U	--
N-Nitrosodimethylamine	97 U	98 U	98 U	--	97 U	--
N-Nitrosodipropylamine	39 UJ	39 UJ	39 UJ	--	39 UJ	--
N-Nitrosodiphenylamine	19 U	20 U	20 U	--	19 U	--
2,3,4,6-Tetrachlorophenol	97 U	98 U	98 U	--	97 U	--
2,4,5-Trichlorophenol	97 U	98 U	98 U	--	97 U	--
2,4,6-Trichlorophenol	97 U	98 U	98 U	--	97 U	--
2,4-Dichlorophenol	58 U	59 U	59 U	--	58 U	--
2,4-Dimethylphenol	58 U	59 U	59 U	--	58 U	--
2,4-Dinitrophenol	190 U	200 U	200 U	--	190 U	--
2-Chlorophenol	19 UJ	20 UJ	20 UJ	--	19 UJ	--
2-Methylphenol	19 U	20 U	20 U	--	19 U	--
2-Nitrophenol	97 U	98 U	98 U	--	97 U	--
4,6-Dinitro-2-methylphenol	190 U	200 U	200 U	--	190 U	--
4-Chloro-3-methylphenol	39 UJ	39 UJ	39 UJ	--	39 UJ	--
4-Methylphenol	21	69	20 U	**76**	19 U	--
4-Nitrophenol	97 UJ	98 UJ	98 UJ	--	97 UJ	--
Pentachlorophenol	49 UJ	30 UJ	30 UJ	--	29 UJ	--
Phenol	39 UJ	39 UJ	39 UJ	--	39 UJ	--
2,3,4,5-Tetrachlorophenol	97 U	98 U	98 U	--	97 U	--
2,3,5,6-Tetrachlorophenol	97 U	98 U	98 U	--	97 U	--
Dimethyl phthalate	19 U	20 U	20 U	--	19 U	--
Diethyl phthalate	19 U	20 U	20 U	--	19 U	--
Dibutyl phthalate	19 U	20 U	20 U	--	19 U	--
Butylbenzyl phthalate	19 U	20 U	20 U	--	19 U	--
Di-n-octyl phthalate	19 U	20 U	31	**29**	19 U	--
Bis(2-ethylhexyl) phthalate	140	82	120	**26**	50	**82**
2-Methylnaphthalene	33	40	37	**10**	39	**-5**
Acenaphthene	33 J	48 J	41 J	**18**	21 J	**65**
Acenaphthylene	27 J	64	44	**41**	40	**10**
Anthracene	50	80	66	**23**	78	**-17**
Fluorene	41	60	49	**19**	37	**28**
Naphthalene	150	160	210	**19**	250	**-17**
Phenanthrene	150	330	250	**37**	220	**13**
Dibenz(a,h)anthracene	32 J	30	24	**15**	29	**-19**
Benz(a)anthracene	97	230	220	**41**	350	**-46**
Benzo(a)pyrene	120	250	260	**37**	320	**-21**
Benzo(b)fluoranthene	150	360	220	**44**	430	**-65**
Benzo(g,h,i)perylene	40	79	83	**35**	82	**1**
Benzo(k)fluoranthene	120	220	370	**53**	340	**8**

Table E-28c. Results for Field Replicates and Split Samples

	LWG0106R002SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
Chrysene	140	320	300	**39**	380	**-24**
Fluoranthene	290	610	600	**36**	740	**-21**
Indeno(1,2,3-cd)pyrene	46	85	97	**35**	100	**-3**
Pyrene	240 J	520 J	620 J	**43**	640 J	**-3**
Herbicides (ug/kg)						
Dalapon	47 U	88 U	95 U	**--**	15 U	**--**
Dicamba	3.2 U	3.2 U	3.1 U	**--**	15 U	**--**
MCPA	3200 U	3200 U	3100 U	**--**	8400 U	**--**
Dichloroprop	6.3 UJ	6.3 UJ	6.2 UJ	**--**	6.4 UJ	**--**
2,4-D	6.3 U	6.3 U	6.2 U	**--**	13 U	**--**
Silvex	1.6 U	1.6 UJ	1.6 UJ	**--**	4.1 UJ	**--**
2,4,5-T	1.8 U	3 UJ	2.5 UJ	**--**	2.2 UJ	**--**
2,4-DB	32 U	46 U	30 U	**--**	100 U	**--**
Dinoseb	3.2 U	2.9 UJ	3.1 UJ	**--**	3.2 UJ	**--**
MCPP	3200 U	3200 U	3100 U	**--**	9500 U	**--**
PCB Congeners (ng/kg)						
PCB001	4.21	3.53	2.45	**26**	4.25	**-54**
PCB002	7.24	5.49	4.88	**21**	7.54	**-43**
PCB003	6.46	5.26	3.94	**24**	9.92	**-86**
PCB004	308	167	167	**38**	167	**<1**
PCB005	0.402	0.213	0.191	**43**	0.284	**-39**
PCB006	7.14	3.97	4.41	**33**	4.61	**-4**
PCB007	1.75	0.963	1.17	**32**	1.34	**-14**
PCB008	21.4	12.8	13.2	**31**	13.5	**-2**
PCB009	2.05	1.17	1.38	**30**	1.38	**<1**
PCB010	38.4	14.2	20.1	**52**	19.1	**5**
PCB011	59.1	45.7	39.2	**21**	38.6	**2**
PCB012 & 013	12.1 J	9.64 J	8.17 J	**20**	12.8	**-44**
PCB014	0.258 J	0.161 U	0.179 U	**26**	0.284	**-45**
PCB015	68.6	45.2	42.6	**27**	76.5	**-57**
PCB016	26.5	13.5	15.9	**37**	14.3	**11**
PCB017	243	118	149	**38**	131	**13**
PCB018 & 030	87.7 J	38.8 J	53 J	**42**	45.4	**15**
PCB019	1230	914	737	**26**	732	**1**
PCB020 & 028	177 J	118 J	125 J	**23**	122	**2**
PCB021 & 033	71 J	44.7 J	44.2 J	**29**	43.2	**2**
PCB022	35.4	24.5	25.1	**22**	24.1	**4**
PCB023	0.271	0.161	0.17	**30**	0.17	**<1**
PCB024	0.163 U	1.1	0.169 U	**113**	0.144 U	**--**
PCB025	41.5	26.1	26.5	**28**	28.1	**-6**
PCB026 & 029	34.1 J	21.7 J	24.6 J	**24**	22.6	**8**
PCB027	161	91.2	96.3	**33**	88.1	**9**
PCB031	113	74.6	84.2	**22**	77.8	**8**
PCB032	117	61	70.1	**36**	68.3	**3**
PCB034	2.44	1.47	1.56	**29**	1.64	**-5**

Table E-28c. Results for Field Replicates and Split Samples

	LWG0106R002SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
PCB035	2.16	2.47	1.79	**16**	2.25	**-23**
PCB036	0.418	0.568	0.388	**21**	0.435	**-11**
PCB037	53.9	38.2	33.8	**25**	33.3	**1**
PCB038	1.05 J	0.201 U	0.694	**66**	0.71	**-2**
PCB039	1.3	1.12	0.888	**19**	0.912	**-3**
PCB040 & 041 & 071	253 J	170 J	158 J	**27**	176	**-11**
PCB042	75.5	47.5	47.5	**28**	50.9	**-7**
PCB043	23.9	9.46	14.7	**46**	12.9	**13**
PCB044 & 047 & 065	2320 J	1470 J	1350 J	**31**	1450 J	**-7**
PCB045 & 051	913 J	478 J	491 J	**39**	518	**-5**
PCB046	39.6	21.8	22.7	**36**	26.4	**-15**
PCB048	45.8	25.3	29.9	**32**	26.8	**11**
PCB049 & 069	669 J	423 J	411 J	**29**	473	**-14**
PCB050 & 053	583 J	305 J	334 J	**38**	360	**-7**
PCB052	579	361	418	**25**	408	**2**
PCB054	388	283	223	**28**	232	**-4**
PCB055	0.496 U	2.38	2.84	**65**	2.47	**14**
PCB056	84.1	61.7	65.1	**17**	62.3	**4**
PCB057	3.81	3.82	3.22	**9**	4.36	**-30**
PCB058	0.765 U	0.99	1.19	**22**	1.65	**-32**
PCB059 & 062 & 075	115 J	71.2 J	70.3 J	**30**	69.1	**2**
PCB060	37.3	29.4	29.7	**14**	28.8	**3**
PCB061 & 070 & 074 & 076	377 J	288 J	319 J	**14**	287	**11**
PCB063	12.5	9.9	8.74	**19**	9.11	**-4**
PCB064	94.3	59.6	66.7	**25**	60.2	**10**
PCB066	245	199	194	**13**	192	**1**
PCB067	22.9	15.3	10.5	**39**	11.7	**-11**
PCB068	29.1	19.6	15.6	**32**	18.2	**-15**
PCB072	8.85	7.58	6.02	**19**	6.67	**-10**
PCB073	77.3	45.3	45.6	**33**	51.2	**-12**
PCB077	27.7	19.5	18.6	**23**	19.3	**-4**
PCB078	0.268 U	0.374 U	0.208 U	**--**	0.177 U	**--**
PCB079	7.48	8.65	6.94	**11**	5.88	**17**
PCB080	0.606 U	0.564 U	0.628 U	**--**	0.535 U	**--**
PCB081	0.932	0.676 J	0.726	**17**	0.843	**-15**
PCB082	61.2	60.6	41.8	**20**	53.5	**-25**
PCB083 & 099	923 J	1040 J	559 J	**30**	838	**-40**
PCB084	218	187	139	**22**	191	**-32**
PCB085 & 116 & 117	128 J	135 J	86.5 J	**23**	105	**-19**
PCB086 & 087 & 097 & 108 & 119 & 125	565 J	288 J	365 J	**35**	478	**-27**
PCB088 & 091	284 J	274 J	174 J	**25**	249	**-35**
PCB089	8.77	7.99	5.15	**26**	6.51	**-23**
PCB090 & 101 & 113	1410 J	1570 J	924 J	**26**	1310 J	**-35**
PCB092	326	311	204	**24**	301	**-38**
PCB093 & 095 & 098 & 100 & 102	1760 J	357 J	1010 J	**67**	1430 J	**-34**

Table E-28c. Results for Field Replicates and Split Samples

	LWG0106R002SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
PCB094	92.4	77.7	49.7	**30**	92.3	**-60**
PCB096	54.7	37.5	27.7	**34**	48.6	**-55**
PCB103	113	98.2	59	**31**	91.1	**-43**
PCB104	43.8	33.3	20.9	**35**	29.9	**-35**
PCB105	213	203	155	**16**	170	**-9**
PCB106	0.351 U	4.14 U	0.797	**117**	1.81	**-78**
PCB107 & 124	22 J	24 J	18.9 J	**12**	18.9	**<1**
PCB109	47	45.9	35.7	**15**	41.9	**-16**
PCB110 & 115	943 J	962 J	645 J	**21**	764	**-17**
PCB111	2.32	3.04 U	1.58	**32**	1.75	**-10**
PCB112	0.354 U	2.02 U	19.1	**145**	50.3	**-90**
PCB114	11.7	11.4	7.01	**26**	7.08	**-1**
PCB118	657	742	481	**21**	559	**-15**
PCB120	7.31	11.5	5.28	**40**	6.08	**-14**
PCB121	10.3	9.9	5.81	**29**	6.42	**-10**
PCB122	6.79	7.88	4.92	**23**	5.54	**-12**
PCB123	12.4	13.9	9.23	**20**	11.4	**-21**
PCB126	2.87	2.47	2.33	**11**	2.54	**-9**
PCB127	1.81	4.12 U	1.64	**55**	2.2	**-29**
PCB128 & 166	237 J	408 J	213 J	**37**	242	**-13**
PCB129 & 138 & 160 & 163	2930 J	6540 J	2900 J	**51**	3390 J	**-16**
PCB130	122	218	106	**41**	116	**-9**
PCB131	21.8	39.6	16.7	**46**	21.9	**-27**
PCB132	800	1510	644	**47**	831	**-25**
PCB133	57.8	94	46.4	**38**	55	**-17**
PCB134 & 143	167 J	270 J	119 J	**42**	173	**-37**
PCB135 & 151 & 154	1520 J	10.1 U	1080 J	**89**	1460	**-30**
PCB136	476	698	293	**41**	434	**-39**
PCB137	60.4	140	57.7	**54**	67	**-15**
PCB139 & 140	36.6 J	60.5 J	25.7 J	**43**	30.4	**-17**
PCB141	709	1620	721	**51**	849	**-16**
PCB142	0.554	7.74 U	0.368 U	**146**	0.411 U	**--**
PCB144	168	355	135	**54**	171	**-24**
PCB145	1.49	3.28 U	1.04	**61**	1.27	**-20**
PCB146	513	985	510	**41**	550	**-8**
PCB147 & 149	2940 J	5550 J	2250 J	**49**	2860	**-24**
PCB148	16.8	20.3	10.3	**32**	12.2	**-17**
PCB150	16.2	23.5	10.6	**39**	15.1	**-35**
PCB152	19.2	25.4	11.4	**38**	19.1	**-50**
PCB153 & 168	3370 J	7940 J	3350 J	**54**	3850 J	**-14**
PCB155	11.9		3.16	**82**	3.33	**-5**
PCB156	221	467	256	**42**	265	**-3**
PCB157	28.2	42.1	25.5	**28**	24.9	**2**
PCB158	259	588	271	**50**	298	**-9**
PCB159	49.7	154	66.2	**62**	67.4	**-2**

Table E-28c. Results for Field Replicates and Split Samples

	LWG0106R002SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
PCB161	0.447 U	5.6 U	0.463 U	**--**	0.394 U	**--**
PCB162	4.16	5.33 U	4.76	**12**	5.76	**-19**
PCB164	225	423	196	**44**	239	**-20**
PCB165	3.49	6.02 U	2.51	**45**	2.51	**<1**
PCB167	103	192	102	**39**	107	**-5**
PCB169	0.55 J	0.403	0.356	**23**	0.394	**-10**
PCB170	1410	3580	1850	**50**	1880	**-2**
PCB171 & 173	433 J	1130 J	552 J	**53**	567	**-3**
PCB172	257	625	320	**49**	309	**3**
PCB174	1550	3620	1750	**49**	1840	**-5**
PCB175	61.8	158	74.3	**53**	73	**2**
PCB176	194	492	206	**57**	215	**-4**
PCB177	867	2100	1010	**51**	1060	**-5**
PCB178	298	708	337	**51**	349	**-3**
PCB179	636	1510	679	**52**	755	**-11**
PCB180 & 193	3680 J	8680 J	5050 J	**45**	4480 J	**12**
PCB181	33.1	20.7	8.73	**58**	9.49	**-8**
PCB182	15.6	10.6	6.31	**43**	6.58	**-4**
PCB183 & 185	1120 J	2870 J	1330 J	**54**	1280	**4**
PCB184	2.57	2.96 U	0.755	**56**	0.739	**2**
PCB186	1.12	2.85 U	0.43	**85**	0.424	**1**
PCB187	1820	4150	2220	**46**	2160	**3**
PCB188	6.29	4.63	3.15	**33**	3.45	**-9**
PCB189	73.9	143	71.1	**42**	66.2	**7**
PCB190	301	741	386	**49**	372	**4**
PCB191	62.7	156	78.8	**50**	75.6	**4**
PCB192	0.287 U	2.67 U	0.297 U	**--**	0.253 U	**--**
PCB194	1470	1820	1000	**29**	830	**19**
PCB195	507	778	425	**32**	400	**6**
PCB196	738	1060	614	**29**	573	**7**
PCB197 & 200	219 J	300 J	193 J	**24**	166 J	**15**
PCB198 & 199	1320 J	2120 J	1130 J	**34**	1040	**8**
PCB201	165	242	149	**27**	140	**6**
PCB202	158	291	166	**36**	154	**8**
PCB203	870	1380	766	**33**	690	**10**
PCB204	1.73	0.343	0.317	**101**	0.318	**<1**
PCB205	87.8	101	50.6	**33**	45.4	**11**
PCB206	533	438	278	**31**	249	**11**
PCB207	75.6	66.8	39.4	**31**	35.1	**12**
PCB208	159	120	85	**31**	77	**10**
PCB209	320	171	135	**47**	130	**4**
Chlorinated Dioxins and Furans (ng/kg)						
2,3,7,8-Tetrachlorodibenzo-p-dioxin	1.53 NJ	1.46 NJ	1.05 NJ	**19**	1.28 NJ	**-20**
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	12.2 NJ	11.1 NJ	7.82 NJ	**22**	9.74 NJ	**-22**
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	6.45 NJ	6.93 NJ	4.97 NJ	**17**	6.75 NJ	**-30**

Table E-28c. Results for Field Replicates and Split Samples

	LWG0106R002SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	40.9 NJ	42.9 NJ	28.9 NJ	**20**	35 NJ	**-19**
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	21.8 NJ	21.1 NJ	15.7 NJ	**17**	19.8 NJ	**-23**
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	333 NJ	545 NJ	262 NJ	**39**	386 NJ	**-38**
Octachlorodibenzo-p-dioxin	2140 NJ	4370 NJ	1660 NJ	**53**	2180 NJ	**-27**
2,3,7,8-Tetrachlorodibenzofuran	3.95	21.9	3.84	**105**	2.88	**29**
1,2,3,7,8-Pentachlorodibenzofuran	5.74 NJ	145 NJ	4.66 NJ	**156**	4.26 NJ	**9**
2,3,4,7,8-Pentachlorodibenzofuran	38.4 NJ	58.8 NJ	22.5 NJ	**46**	17.7 NJ	**24**
1,2,3,4,7,8-Hexachlorodibenzofuran	40.7 NJ	239 NJ	36.2 NJ	**110**	36.7 NJ	**-1**
1,2,3,6,7,8-Hexachlorodibenzofuran	57.3 NJ	77 NJ	30.6 NJ	**42**	23.6 NJ	**26**
1,2,3,7,8,9-Hexachlorodibenzofuran	1.27 NJ	4.3 NJ	0.756 NJ	**91**	1.04 NJ	**-32**
2,3,4,6,7,8-Hexachlorodibenzofuran	60.7 NJ	34.4 NJ	30.6 NJ	**39**	22.1 NJ	**32**
1,2,3,4,6,7,8-Heptachlorodibenzofuran	87.7 NJ	209 NJ	69.4 NJ	**62**	65.4 NJ	**6**
1,2,3,4,7,8,9-Heptachlorodibenzofuran	14.5 NJ	34.5 NJ	12 NJ	**61**	13.1 NJ	**-9**
Octachlorodibenzofuran	109 NJ	828 NJ	122 NJ	**117**	113 NJ	**8**
Tetrachlorodibenzo-p-dioxin homologs	43.1 NJ	46.1 NJ	27.6 NJ	**26**	34.5 NJ	**-22**
Pentachlorodibenzo-p-dioxin homologs	139 NJ	141 NJ	99.6 NJ	**18**	103 NJ	**-3**
Hexachlorodibenzo-p-dioxin homologs	313 NJ	330 NJ	246 NJ	**15**	255 NJ	**-4**
Heptachlorodibenzo-p-dioxin homologs	692 NJ	1010 NJ	532 NJ	**33**	811 NJ	**-42**
Tetrachlorodibenzofuran homologs	537 NJ	362 NJ	454 NJ	**19**	319 NJ	**35**
Pentachlorodibenzofuran homologs	3430 NJ	1650 NJ	1840 NJ	**42**	1350 NJ	**31**
Hexachlorodibenzofuran homologs	2040 NJ	1280 NJ	981 NJ	**38**	743 NJ	**28**
Heptachlorodibenzofuran homologs	300 NJ	966 NJ	237 NJ	**81**	227 NJ	**4**

Table E-28d. Results for Field Replicates and Split Samples

	LWG0109B027SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
Conventional Analytes (percent)						
Total solids	81.6	80.2	80	**1**	81.5	**-2**
Total organic carbon	1	1.2	0.82	**19**	1	**-20**
Gravel	16.5	14.4	9.91	**25**	8.25	**18**
Very coarse sand	4.08	3.62	4.16	**7**	4.55	**-9**
Coarse sand	22	21.2	23	**4**	23.5	**-2**
Medium sand	29.6	28	31.2	**5**	30.7	**2**
Fine sand	11.3	12.8	12.7	**7**	12.2	**4**
Very fine sand	7.18	7.56	7.78	**4**	7.23	**7**
Coarse silt	2.56	3.66	3.57	**19**	6.53	**-59**
Medium silt	2.52	3.03	2.91	**9**	2.83	**3**
Fine silt	1.46	1.8	1.39	**14**	1.38	**1**
Very fine silt	0.95	1.37	1.3	**19**	1.04	**22**
8-9 Phi clay	0.75	1.03	0.84	**16**	0.78	**7**
9-10 Phi clay	0.61	0.79	0.66	**14**	0.56	**16**
>10 Phi clay	0.59	0.76	0.62	**14**	0.49	**23**
Metals (mg/kg)						
Aluminum	20900	19300	16100	**13**	15600	**3**
Antimony	0.2 J					
Arsenic	1.4	1.4	1.4	**<1**	1.2	**15**
Cadmium	0.06	0.07	0.1	**27**	0.08	**22**
Chromium	23	21	17.3	**14**	17.5	**-1**
Copper	23.3	24	20.8	**7**	23.2	**-11**
Lead	9.2	7.6	7.1	**14**	15	**-71**
Mercury	0.04 U	0.06 U	0.06 U	**--**	0.06 U	**--**
Nickel	21	21	18	**9**	18	**<1**
Selenium	0.2 U	0.2 U	0.2 U	**--**	0.2 U	**--**
Silver	0.02 U	0.02 U	0.02 U	**--**	0.02	**<1**
Zinc	71	71	59.4	**10**	61	**-3**
PCB Aroclors (ug/kg)						
Aroclor 1016	3.9 U	3.9 U	3.9 U	**--**	3.9 U	**--**
Aroclor 1242	3.9 U	3.9 U	3.9 U	**--**	3.9 U	**--**
Aroclor 1248	3.9 U	3.9 U	3.9 U	**--**	3.9 U	**--**
Aroclor 1254	10	26	25	**44**	14	**56**
Aroclor 1260	10 U	54	13 U	**96**	8.6 U	**--**
Aroclor 1221	7.9 U	7.8 U	7.8 U	**--**	7.8 U	**--**
Aroclor 1232	3.9 U	3.9 U	3.9 U	**--**	3.9 U	**--**
Pesticides (ug/kg)						
2,4'-DDD	0.39 U	0.39 U	0.39 U	**--**	0.39 U	**--**
2,4'-DDE	1.2 U	2.3 U	1.6 U	**--**	1.1 U	**--**
2,4'-DDT	0.39 U	0.39 U	0.39 U	**--**	0.39 U	**--**
4,4'-DDD	0.39 U	0.73 U	0.39 U	**--**	0.39 U	**--**
4,4'-DDE	0.77 U	1.2 U	1.1 U	**--**	0.79 U	**--**
4,4'-DDT	0.94 U	2.6 U	2 U	**--**	1.1 U	**--**

Table E-28d. Results for Field Replicates and Split Samples

	LWG0109B027SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
Aldrin	0.2 U	0.2 U	0.2 U	--	0.2 U	--
alpha-Hexachlorocyclohexane	0.2 U	0.2 U	0.2 U	--	0.2 U	--
beta-Hexachlorocyclohexane	0.2 U	0.2 U	0.2 U	--	0.2 U	--
delta-Hexachlorocyclohexane	0.2 U	0.2 U	0.2 U	--	0.2 U	--
gamma-Hexachlorocyclohexane	0.2 U	0.2 U	0.2 U	--	0.2 U	--
cis-Chlordane	0.2 U	0.2 U	0.2 U	--	0.2 U	--
trans-Chlordane	0.27 U	0.39 U	0.38 U	--	0.24 U	--
Oxychlordane	0.39 U	0.39 U	0.39 U	--	0.39 U	--
cis-Nonachlor	0.39 U	1.6 U	0.39 U	--	0.39 U	--
trans-Nonachlor	0.39 U	0.39 U	0.39 U	--	0.39 U	--
Dieldrin	0.39 U	0.39 U	0.39 U	--	0.39 U	--
alpha-Endosulfan	0.2 U	0.2 U	0.2 U	--	0.2 U	--
beta-Endosulfan	0.39 U	0.39 U	0.39 U	--	0.39 U	--
Endosulfan sulfate	0.39 U	1.7 U	0.39 U	--	0.39 U	--
Endrin	0.39 U	0.39 U	0.39 U	--	0.39 U	--
Endrin aldehyde	0.39 U	1.9 U	0.39 U	--	0.39 U	--
Endrin ketone	0.39 U	0.39 U	0.39 U	--	0.39 U	--
Heptachlor	0.2 U	0.2 U	0.2 U	--	0.2 U	--
Heptachlor epoxide	0.2 U	0.2 U	0.2 U	--	0.2 U	--
Methoxychlor	2 U	2 U	2 U	--	2 U	--
Mirex	0.39 U	0.39 U	0.39 U	--	0.39 U	--
Toxaphene	20 U	38 U	20 U	--	20 U	--
Semivolatile Organic Compounds (ug/kg)						
1,2,4-Trichlorobenzene	20 U	19 U	19 U	--	20 U	--
1,2-Dichlorobenzene	20 U	19 U	19 U	--	20 U	--
1,3-Dichlorobenzene	20 U	19 U	19 U	--	20 U	--
1,4-Dichlorobenzene	20 U	19 U	19 U	--	20 U	--
Azobenzene	20 U	19 U	19 U	--	20 U	--
Bis(2-chloro-1-methylethyl) ether	20 U	19 U	19 U	--	20 U	--
2,4-Dinitrotoluene	98 U	97 U	96 U	--	99 U	--
2,6-Dinitrotoluene	98 U	97 U	96 U	--	99 U	--
2-Chloronaphthalene	20 U	19 U	19 U	--	20 U	--
2-Nitroaniline	98 U	97 U	96 U	--	99 U	--
3,3'-Dichlorobenzidine	98 U	97 U	96 U	--	99 U	--
3-Nitroaniline	120 U	120 U	110 U	--	120 U	--
4-Bromophenyl phenyl ether	20 U	19 U	19 U	--	20 U	--
4-Chloroaniline	59 U	58 U	57 U	--	59 U	--
4-Chlorophenyl phenyl ether	20 U	19 U	19 U	--	20 U	--
4-Nitroaniline	98 U	97 U	96 U	--	99 U	--
Aniline	20 U	19 U	19 U	--	20 U	--
Benzoic acid	200 UJ	190 UJ	190 UJ	--	200 UJ	--
Benzyl alcohol	98 U	97 U	96 U	--	99 U	--
Bis(2-chloroethoxy) methane	20 U	19 U	19 U	--	20 U	--
Bis(2-chloroethyl) ether	39 U	39 U	38 U	--	39 U	--

Table E-28d. Results for Field Replicates and Split Samples

	LWG0109B027SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
Carbazole	2 U	1.9 U	1.9 U	--	3.9 U	--
Dibenzofuran	2 U	1.9 U	1.9 U	--	3.9 U	--
Hexachlorobenzene	0.2 U	0.2 U	0.2 U	--	0.2 U	--
Hexachlorobutadiene	0.36 U	0.54 U	0.45 U	--	0.2 U	--
Hexachlorocyclopentadiene	98 U	97 U	96 U	--	99 U	--
Hexachloroethane	2 U	1.9 U	1.9 U	--	3.9 U	--
Isophorone	20 U	19 U	19 U	--	20 U	--
Nitrobenzene	20 U	19 U	19 U	--	20 U	--
N-Nitrosodimethylamine	98 U	97 U	96 U	--	99 U	--
N-Nitrosodipropylamine	39 U	39 U	38 U	--	39 U	--
N-Nitrosodiphenylamine	20 U	19 U	19 U	--	20 U	--
2,3,4,6-Tetrachlorophenol	98 U	97 U	96 U	--	99 U	--
2,4,5-Trichlorophenol	98 U	97 U	96 U	--	99 U	--
2,4,6-Trichlorophenol	98 U	97 U	96 U	--	99 U	--
2,4-Dichlorophenol	59 U	58 U	57 U	--	59 U	--
2,4-Dimethylphenol	59 U	58 U	57 U	--	59 U	--
2,4-Dinitrophenol	200 UJ	190 UJ	190 UJ	--	200 UJ	--
2-Chlorophenol	20 U	19 U	19 U	--	20 U	--
2-Methylphenol	20 U	19 U	19 U	--	20 U	--
2-Nitrophenol	98 U	97 U	96 U	--	99 U	--
4,6-Dinitro-2-methylphenol	200 UJ	190 UJ	190 UJ	--	200 UJ	--
4-Chloro-3-methylphenol	39 U	39 U	38 U	--	39 U	--
4-Methylphenol	20 U	19 U	19 U	--	20 U	--
4-Nitrophenol	98 U	97 U	96 U	--	99 U	--
Pentachlorophenol	9.8 U	9.7 U	9.6 U	--	20 U	--
Phenol	39 U	39 U	38 U	--	39 U	--
2,3,4,5-Tetrachlorophenol	98 U	97 U	96 U	--	99 U	--
2,3,5,6-Tetrachlorophenol	98 U	97 U	96 U	--	99 U	--
Dimethyl phthalate	20 U	19 U	19 U	--	20 U	--
Diethyl phthalate	20 U	19 U	19 U	--	20 U	--
Dibutyl phthalate	20 U	57	27	**57**	20 U	**30**
Butylbenzyl phthalate	20 U	19 U	19 U	--	20 U	--
Di-n-octyl phthalate	20 U	19 U	19 U	--	20 U	--
Bis(2-ethylhexyl) phthalate	21	33	30	**22**	54	**-57**
2-Methylnaphthalene	20 U	19 U	19 U	--	20 U	--
Acenaphthene	20 U	19 U	19 U	--	20 U	--
Acenaphthylene	20 U	19 U	19 U	--	20 U	--
Anthracene	20 U	19 U	19 U	--	20 U	--
Fluorene	20 U	19 U	19 U	--	20 U	--
Naphthalene	20 U	19 U	19 U	--	20 U	--
Phenanthrene	20 U	19 U	19 U	--	20 U	--
Dibenz(a,h)anthracene	2 U	1.9 U	1.9 U	--	3.9 U	--
Benz(a)anthracene	9.8	5.2	6.7	**32**	9.4	**-34**
Benzo(a)pyrene	9	4.8	7.8	**30**	6.3	**21**

Table E-28d. Results for Field Replicates and Split Samples

	LWG0109B027SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
Benzo(b)fluoranthene	10	6	9.8	**26**	11	**-12**
Benzo(g,h,i)perylene	8.4	5.2	7.5	**23**	5.5	**31**
Benzo(k)fluoranthene	11	6.2	8.8	**28**	8.3	**6**
Chrysene	12	8.3	10	**18**	15	**-40**
Fluoranthene	24	19 U	19 U	**14**	29	**-42**
Indeno(1,2,3-cd)pyrene	6.6	4.4	5.9	**20**	5.9	**<1**
Pyrene	20 U	19 U	19 U	**3**	24	**-23**
Herbicides (ug/kg)						
Dalapon	17 U	16 U	16 U	**--**	15 U	**--**
Dicamba	3.3 UJ	3.2 UJ	3.1 UJ	**--**	3.1 UJ	**--**
MCPA	3300 U	3200 U	3100 U	**--**	3100 U	**--**
Dichloroprop	6.6 UJ	6.4 UJ	6.2 UJ	**--**	6.2 UJ	**--**
2,4-D	6.6 UJ	6.4 UJ	6.2 UJ	**--**	6.2 UJ	**--**
Silvex	1.7 UJ	1.6 UJ	1.6 UJ	**--**	1.5 UJ	**--**
2,4,5-T	1.7 U	1.6 U	1.6 U	**--**	1.5 U	**--**
2,4-DB	33 U	32 U	31 U	**--**	31 U	**--**
Dinoseb	3.3 U	3.2 U	3.1 U	**--**	3.1 U	**--**
MCPP	3300 U	3200 U	3100 U	**--**	3100 U	**--**

Table E-28e. Results for Field Replicates and Split Samples

	LWG0109R001SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
Conventional Analytes (percent)						
Total solids	69.9	59.8	47.7	**19**	57.4	**-18**
Total organic carbon	2.3	2.5	3.3	**20**	2.1	**44**
Gravel	35.5	27.3	3.91	**74**	5.42	**-32**
Very coarse sand	15.8	18.4	8.19	**38**	8.66	**-6**
Coarse sand	13.6	16.6	12.2	**16**	12.5	**-2**
Medium sand	13.4	10.7	13.6	**13**	14.1	**-4**
Fine sand	7.34	7.79	17.6	**53**	18.2	**-3**
Very fine sand	3.22	3.91	13.8	**85**	13.9	**-1**
Coarse silt	2.2	5.04	11.6	**77**	7.37	**45**
Medium silt	3.11	3.65	6.21	**38**	7.42	**-18**
Fine silt	1.76	2.19	4.73	**55**	4.25	**11**
Very fine silt	1.67	1.69	3.58	**47**	3.11	**14**
8-9 Phi clay	1.08	1.16	2.03	**37**	2.25	**-10**
9-10 Phi clay	0.76	0.73	1.27	**33**	1.25	**2**
>10 Phi clay	0.53	0.77	1.33	**47**	1.58	**-17**
Metals (mg/kg)						
Aluminum	14500	16100	22000	**23**	21300	**3**
Antimony	0.5 J		0.5 J	**<1**	0.5 J	**<1**
Arsenic	8.3	8.9	7.3	**10**	7.1	**3**
Cadmium	0.23	0.39	0.61	**47**	0.65	**-6**
Chromium	18	19	33	**36**	31	**6**
Copper	66.5	90.6	108	**24**	98.1	**10**
Lead	44 J	39 J	52 J	**15**	50 J	**4**
Mercury	0.18	0.15	0.41	**58**	0.36	**13**
Nickel	17	17	24	**21**	23	**4**
Selenium	0.3 U	0.3 U	0.4 U	**--**	0.4 U	**--**
Silver	0.3	0.46	1	**63**	0.97	**3**
Zinc	157	192	335	**41**	270	**21**
PCB Aroclors (ug/kg)						
Aroclor 1016	3.9 U	3.9 U	3.9 U	**--**	4 U	**--**
Aroclor 1242	3.9 U	3.9 U	3.9 U	**--**	4 U	**--**
Aroclor 1248	11 U	8.8 U	20 U	**--**	17 U	**--**
Aroclor 1254	21 U	24 U	66	**68**	58 J	**13**
Aroclor 1260	31 U	21	71	**65**	94 J	**-28**
Aroclor 1221	7.8 U	7.9 U	7.8 U	--	7.9 U	--
Aroclor 1232	3.9 U	3.9 U	3.9 U	**--**	4 U	**--**
Pesticides (ug/kg)						
2,4'-DDD	0.68 UJ	0.58 UJ	4.9 U	**--**	1.6 U	**--**
2,4'-DDE	4 U	9.2 U	11 U	--	15 U	--
2,4'-DDT	0.39 UJ	0.39 UJ	0.39 U	**--**	3.9 U	**--**
4,4'-DDD	1.8 U	1.6 UJ	2.9 U	--	3.1 U	--
4,4'-DDE	1.8 UJ	2 UJ	4.4 U	**--**	4.5 U	**--**
4,4'-DDT	3 U	3.3 U	7.8 U	--	12 U	--
Aldrin	0.19 U	0.2 U	1.4 U	**--**	1.4 U	**--**

Table E-28e. Results for Field Replicates and Split Samples

	LWG0109R001SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
alpha-Hexachlorocyclohexane	0.19 U	0.2 U	0.2 U	--	0.2 U	--
beta-Hexachlorocyclohexane	1.1 U	1.4 U	0.76 U	--	1.1 U	--
delta-Hexachlorocyclohexane	0.19 UJ	0.2 UJ	0.2 U	--	0.2 U	--
gamma-Hexachlorocyclohexane	0.19 U	0.2 U	0.2 U	--	0.2 U	--
cis-Chlordane	0.19 U	0.39 U	1.1 U	--	0.97 U	--
trans-Chlordane	11 U	0.9 U	3.1 U	--	2.3 U	--
Oxychlordane	0.39 U	0.39 U	1.3 U	--	0.7 U	--
cis-Nonachlor	1.2 U	1.1 U	2.8 U	--	3.4 U	--
trans-Nonachlor	1.7 U	0.39 U	0.39 U	--	0.4 U	--
Dieldrin	1.1 U	1.1 U	2.6 U	--	2.2 U	--
alpha-Endosulfan	0.19 U	0.2 U	0.94 U	--	0.79 U	--
beta-Endosulfan	0.39 U	0.39 U	0.39 U	--	0.4 U	--
Endosulfan sulfate	0.39 U	0.39 U	29 U	--	29 U	--
Endrin	0.39 U	0.39 U	0.39 U	--	0.7 U	--
Endrin aldehyde	1.9 U	1 U	2.3 U	--	3.5 U	--
Endrin ketone	1.2 U	1.3 U	2.9 U	--	4.2 U	--
Heptachlor	0.19 U	0.2 U	0.2 U	--	0.2 U	--
Heptachlor epoxide	0.19 U	0.2 U	0.2 U	--	0.2 U	--
Methoxychlor	1.9 U	2 U	2 U	--	13 U	--
Mirex	1.3 U	2.3 U	3.9 U	--	0.4 U	--
Toxaphene	19 U	20 U	20 U	--	200 U	--
Semivolatile Organic Compounds (ug/kg)						
1,2,4-Trichlorobenzene	79 U	20 U	78 U	--	79 U	--
1,2-Dichlorobenzene	79 U	20 U	78 U	--	79 U	--
1,3-Dichlorobenzene	79 U	20 U	78 U	--	79 U	--
1,4-Dichlorobenzene	79 U	20 U	78 U	--	79 U	--
Azobenzene	79 U	20 U	78 U	--	79 U	--
Bis(2-chloro-1-methylethyl) ether	79 U	20 U	78 U	--	79 U	--
2,4-Dinitrotoluene	390 U	99 U	390 U	--	400 U	--
2,6-Dinitrotoluene	390 U	99 U	390 U	--	400 U	--
2-Chloronaphthalene	79 U	20 U	78 U	--	79 U	--
2-Nitroaniline	390 U	99 U	390 U	--	400 U	--
3,3'-Dichlorobenzidine	390 UJ	99 UJ	390 UJ	--	400 UJ	--
3-Nitroaniline	470 U	120 U	470 U	--	480 U	--
4-Bromophenyl phenyl ether	79 U	20 U	78 U	--	79 U	--
4-Chloroaniline	240 U	59 U	230 U	--	240 U	--
4-Chlorophenyl phenyl ether	79 U	20 U	78 U	--	79 U	--
4-Nitroaniline	390 U	99 U	390 U	--	400 U	--
Aniline	79 U	20 U	78 U	--	79 U	--
Benzoic acid	790 U	200 U	780 U	--	790 U	--
Benzyl alcohol	390 U	99 U	390 U	--	400 U	--
Bis(2-chloroethoxy) methane	79 U	20 U	78 U	--	79 U	--
Bis(2-chloroethyl) ether	160 U	40 U	160 U	--	160 U	--
Carbazole	180	24	130	**72**	85 J	**42**
Dibenzofuran	160	20	56 J	**92**	52 J	**7**

Table E-28e. Results for Field Replicates and Split Samples

	LWG0109R001SDS015-					
Sample ID	-C10	-C20	-C31		-C32	
Sample Type Code	Sample	Field Rep 1	Field Rep 2	**RSD**	Field Split	**RPD**
Hexachlorobenzene	0.22 U	0.2 U	0.35 U	--	0.27 U	--
Hexachlorobutadiene	0.4 U	0.45 U	0.2 U	--	0.2 U	--
Hexachlorocyclopentadiene	390 U	99 U	390 U	--	400 U	--
Hexachloroethane	20 U	9.9 U	19 U	--	20 U	--
Isophorone	79 U	20 U	78 U	--	79 U	--
Nitrobenzene	79 U	20 U	78 U	--	79 U	--
N-Nitrosodimethylamine	390 U	99 U	390 U	--	400 U	--
N-Nitrosodipropylamine	160 U	40 U	160 U	--	160 U	--
N-Nitrosodiphenylamine	79 U	20 U	78 U	--	79 U	--
2,3,4,6-Tetrachlorophenol	390 U	99 U	390 U	--	400 U	--
2,4,5-Trichlorophenol	390 U	99 U	390 U	--	400 U	--
2,4,6-Trichlorophenol	390 U	99 U	390 U	--	400 U	--
2,4-Dichlorophenol	240 U	59 U	230 U	--	240 U	--
2,4-Dimethylphenol	240 U	59 U	230 U	--	240 U	--
2,4-Dinitrophenol	790 U	200 U	780 U	--	790 U	--
2-Chlorophenol	79 U	20 U	78 U	--	79 U	--
2-Methylphenol	79 U	20 U	78 U	--	79 U	--
2-Nitrophenol	390 U	99 U	390 U	--	400 U	--
4,6-Dinitro-2-methylphenol	790 U	200 U	780 U	--	790 U	--
4-Chloro-3-methylphenol	160 U	40 U	160 U	--	160 U	--
4-Methylphenol	160	84	220	**44**	130	**51**
4-Nitrophenol	390 U	99 U	390 U	--	400 U	--
Pentachlorophenol	250 J	78	220 J	**50**	150 J	**38**
Phenol	160 U	40 U	160 U	--	160 U	--
2,3,4,5-Tetrachlorophenol	390 U	99 U	390 U	--	400 U	--
2,3,5,6-Tetrachlorophenol	390 U	99 U	390 U	--	400 U	--
Dimethyl phthalate	79 U	20 U	78 U	--	79 U	--
Diethyl phthalate	79 U	20 U	78 U	--	79 U	--
Dibutyl phthalate	79 U	20 U	78 U	--	79 U	--
Butylbenzyl phthalate	79 U	33	78 U	**41**	79 U	--
Di-n-octyl phthalate	79 U	20 U	180	**87**	11000	**-194**
Bis(2-ethylhexyl) phthalate	1000	640	1700	**48**	3400	**-67**
2-Methylnaphthalene	110	20 U	78 U	**66**	79 U	--
Acenaphthene	100	20 U	78 U	**63**	79 U	--
Acenaphthylene	290	30	130	**87**	79 U	**49**
Anthracene	430	43	250	**80**	120	**70**
Fluorene	300	22	85	**107**	79 U	**7**
Naphthalene	230	26	78 U	**95**	79 U	--
Phenanthrene	1500	190	960	**75**	400	**82**
Dibenz(a,h)anthracene	150 J	9.9 U	170	**79**	83 J	**69**
Benz(a)anthracene	650	130	1500	**91**	510	**99**
Benzo(a)pyrene	540	170	1500	**93**	570	**90**
Benzo(b)fluoranthene	500	200	1400	**89**	640	**75**
Benzo(g,h,i)perylene	200	76	420	**75**	230	**58**
Benzo(k)fluoranthene	570	210	2300	**109**	590	**118**

LWG
LOWER WILLAMETTE GROUP

Portland Harbor RI/FS
Round 1 Site Characterization Summary Report

APPENDIX F

SCRA DATABASE FOR INDICATOR CHEMICALS

October 12, 2004

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Prepared for:
The Lower Willamette Group

Prepared by:
Integral Consulting, Inc.

Table F-1. Round 1 Sediment Data.

Location	Sample	Chemical Name / Unit / Type	Arsenic mg/kg	Cadmium mg/kg	Copper mg/kg	Lead mg/kg	Mercury mg/kg	Nickel mg/kg	Zinc mg/kg	Tributyltin ion ug/kg	Bis(2-ethylhexyl) phthalate ug/kg	High Molecular Weight PAH* ug/kg	Low Molecular Weight PAH* ug/kg
02R001	LWG0102R001SDS015C00	normal	3.6	0.48	40	26 J	0.09 UJ	27	194		200	2070 JT	471 JT
02R015	LWG0102R015SDS015C00	normal	4.7	1.6	38.9	110	0.07	24	813		130 U	2080 JT	190 T
03B030	LWG0103B030SDS015C00	normal	1.9	0.04	14.4	6.9	0.05 U	16 J	56.2		61	83.2 JT	19 UT
03B031	LWG0103B031SDS015C00	normal	3.2	0.07	22.8	11.3	0.05 U	23 J	73		45	466 JT	26 T
03B033	LWG0103B033SDS015C00	normal	4	0.06	15.8	12.8	0.05 U	18 J	62		46	44.6 T	19 UT
03R001	LWG0103R001SDS015C00	normal	4.1	0.07	22.1	7	0.06 U	19	72		94 U	2360 JT	70 T
03R002	LWG0103R002SDS015C00	normal	4	0.21	41.9	16	0.09 U	26	100		130 U	2290 JT	650 T
03R003	LWG0103R003SDS015C10	normal	3.95 T	0.09 T	20.3 T	11.5 T	0.06 UT	21.5 T	74.8 T		97 U	1230 JT	82 T
03R003	LWG0103R003SDS015C20	field rep	4.5	0.14	23.7	12	0.07 U	26	89		60 U	1400 JT	248 T
03R003	LWG0103R003SDS015C31	field rep	4.85 T	0.095 T	19.7 T	13 T	0.06 UT	21.5 T	70.7 T		38 UT	797 JT	65.5 T
03R004	LWG0103R004SDS015C11	normal	3.55 T	0.355 T	33 T	24 T	0.085 T	25.5 T	147 T	38.8 T	7150 T	1440 JT	267 T
03R004	LWG0103R004SDS015C20	field rep	3.2	0.35	23.2	23	0.05 U	19	127	22.3	9700	903 JT	152 T
03R004	LWG0103R004SDS015C30	field rep	3.2	0.25	44.9	22	0.06 U	20	134	27.6	19000 U	727 JT	91 T
03R005	LWG0103R005SDS015C00	normal	7.8	0.9	78.2	52 J	0.09 J	29	370	57	2200	54900 JT	12300 JT
03R032	LWG0103R032SDS015C00	normal	5.6	0.18	35.8	12	0.07 U	26	97		96 U	1820 JT	533 T
03R034	LWG0103R034SDS015C00	normal	2.1	0.06	16.3	5.3 UJ	0.05 UJ	17	57.5		26	67.7 JT	20 UT
03R040	LWG0103R040SDS015C00	normal	2.7	0.24	34.6	14 J	0.13	24	106		150	9940 T	2440 T
03R041	LWG0103R041SDS015C00	normal	3.3	0.36	45.8	16.4 J	0.1 U	26	112		190	1190 JT	237 T
04B023	LWG0104B023SDS015C00	normal	2.7	0.06	33.4	14	0.04 U	14 J	116		46	396 JT	33 T
04B024	LWG0104B024SDS015C00	normal	4.7	0.09	194	12	0.05 U	29 J	96		65	3100 T	442 T
04R002	LWG0104R002SDS015C00	normal	10.3	4.5	134	820	0.08	24	791		600 UJ	304000 JT	34400 T
04R003	LWG0104R003SDS015C00	normal	4.7	1.5	31.7	87 J	0.06 UJ	20	301		280	10200 JT	1460 JT
04R004	LWG0104R004SDS015C00	normal	3.7	0.23	70.8	62 J	0.07 UJ	23	136		200	2770 JT	767 JT
05B018	LWG0105B018SDS015C00	normal	2.4	0.09	108	62	0.05 U	23 J	81		230	781 JT	49 T
05B019	LWG0105B019SDS015C00	normal	2.6	0.03	24.2	5.6	0.05 U	14 J	105		50	45.1 T	19 UT
05R001	LWG0105R001SDS015C00	normal	4.6	0.04	16.6	4.7	0.06 U	17	54.8		62 UJ	297 JT	20 UT
05R003	LWG0105R003SDS015C00	normal	3.5	0.24	97.2	154 J	0.12 J	27	134		340	12700 JT	2570 JT
05R020	LWG0105R020SDS015C00	normal	4.9	0.2	47.8	28	0.08 U	25	115		200 UJ	26400 JT	10400 T
05R040	LWG0105R040SDS015C00	normal	2.4	0.16	35.7	10.8 J	0.1 U	24	92		230 U	343000 T	117000 T
05R041	LWG0105R041SDS015C00	normal	2.9	0.16	34	11.5 J	0.08 U	22	89		69	791 JT	20 UT
06B022	LWG0106B022SDS015C00	normal	2.6	0.23	42.7	30	0.05 U	24	138		19 U	102 T	92 T
06B025	LWG0106B025SDS015C00	normal	2.3	0.06	21	50	0.05 U	69	81		98 U	388000 JT	76400 T
06B026	LWG0106B026SDS015C00	normal	1.7	0.06	19.9	55	0.18	18	60		19 U	71.7 T	19 UT
06B029	LWG0106B029SDS015C00	normal	1.7	0.05	15.8	5.6	0.06 U	16	65		20	2280 T	178 T
06B030	LWG0106B030SDS015C00	normal	9.9	0.13	606	28	0.05 U	41	107		210	611 JT	57 T
06R001	LWG0106R001SDS015C00	normal	2.5	0.27	46.5	55 J	0.09 UJ	30	118		740	15200 JT	1930 JT
06R002	LWG0106R002SDS015C10	normal	4.35 T	0.145 T	45.9 T	47.5 JT	0.54 JT	20.5 T	106 T		140	1280 JT	484 JT
06R002	LWG0106R002SDS015C20	field rep	3.3	0.13	38.1	57 J	0.64 J	20	104		82	2700 JT	782 JT
06R002	LWG0106R002SDS015C31	field rep	3.7 T	0.21 T	64.1 T	57 JT	0.94 JT	32.5 T	98.5 T		85 T	3100 JT	691 JT
06R004	LWG0106R004SDS015C00	normal	2.7	0.08	18	14 J	0.05 UJ	18	79		120	12700 JT	1660 JT
06R031	LWG0106R031SDS015C00	normal	4.2	0.15	34.1	19	0.09 U	21	86	14.2	130 J	10200 JT	21500 T

Table F-1. Round 1 Sediment Data.

Location	Sample	Chemical Name / Unit / Type	Polychlorinated biphenyls* ug/kg	2,3,7,8-TCDD pg/g	2,3,7,8-TCDD TEQ* pg/g	4,4'-DDD ug/kg	4,4'-DDE ug/kg	4,4'-DDT ug/kg	Total pp-DDTs* ug/kg	Dibenzofuran ug/kg	4-Methylphenol ug/kg	o-Xylene ug/kg	m,p-Xylene ug/kg
02R001	LWG0102R001SDS015C00	normal	1090 T	0.252 NJ	19.5 T	1.8 U	11 U	0.39 U	11 UT	30 T	74		
02R015	LWG0102R015SDS015C00	normal	1180 T			4.7 UJ	15 UJ	23 U	23 UT	18 T	58 U		
03B030	LWG0103B030SDS015C00	normal	7.7 UT			0.39 U	0.39 U	0.39 U	0.39 UT	1.9 UT	19 U		
03B031	LWG0103B031SDS015C00	normal	8 T			0.39 U	0.39 U	0.39 U	0.39 UT	1.9 UT	19 U		
03B033	LWG0103B033SDS015C00	normal	7.8 UT			0.39 U	0.39 U	0.39 U	0.39 UT	1.9 UT	19 U		
03R001	LWG0103R001SDS015C00	normal	7.9 UT			0.7	1.2	0.49 U	1.9 T	5.9 UT	59 U		
03R002	LWG0103R002SDS015C00	normal	26 UT			10 J	4.8 J	210	225 JT	50 T	58 U		
03R003	LWG0103R003SDS015C10	normal	6.8 T	0.107 UJ	2.05 T	0.93	0.86	3.3	5.09 T	5.8 UT	58 U		
03R003	LWG0103R003SDS015C20	field rep	15.8 T			0.93	0.84	1.7 U	1.77 T	5.8 UT	19 U		
03R003	LWG0103R003SDS015C31	field rep	7.2 T			0.98 T	0.85 T	2.8 T	4.63 T	5.8 UT	19 UT		
03R004	LWG0103R004SDS015C11	normal	346 T	0.274 NJ	10.5 T	3.1 UJT	4.8 UJT	7.4 UT	7.4 UT	10.4 T	19 UT		
03R004	LWG0103R004SDS015C20	field rep	259 T			1.8 U	3.1 U	6.5 U	6.5 UT	7 T	20 U		
03R004	LWG0103R004SDS015C30	field rep	122 T			1.3 U	2.1 U	4.7 U	4.7 UT	5.9 UT	20 U		
03R005	LWG0103R005SDS015C00	normal	1500 T	0.72 NJ	78 T	11 UJ		0.4 U	11 UJT	330 T	120 U		
03R032	LWG0103R032SDS015C00	normal	27 T			4.7	3.2	2.2 U	7.9 T	22 T	21		
03R034	LWG0103R034SDS015C00	normal	12.5 T			0.38 UJ	0.38 U	0.38 U	0.38 UT	2 UT	20 U		
03R040	LWG0103R040SDS015C00	normal	13 UT			16 J	7.8 UJ	88	104 JT	43 T	73		
03R041	LWG0103R041SDS015C00	normal	11 T			2.2	3	9.7	14.9 T	6.5 T	20 U		
04B023	LWG0104B023SDS015C00	normal	3.4 JT			1.8	0.39 U	0.75	2.55 T	2 UT	20 U		
04B024	LWG0104B024SDS015C00	normal	7.7 UT			2.7	0.65 U	0.58 U	2.7 T	4.2 T	19 U		
04R002	LWG0104R002SDS015C00	normal	66 T			3.9 UJ	3.9 U	6.8 U	6.8 UT	880 T	110 U		
04R003	LWG0104R003SDS015C00	normal	30 T			3.3 UJ	2.6 U	4 U	4 UT	52 T	41		
04R004	LWG0104R004SDS015C00	normal	16 T			3.5	1.9 U	2.1 UJ	3.5 T	29 T	81		
05B018	LWG0105B018SDS015C00	normal	19.8 T			0.38 U	0.44 U	1.4 U	1.4 UT	3.2 T	19 U		
05B019	LWG0105B019SDS015C00	normal	7.7 UT			0.39 U	0.39 U	0.39 U	0.39 UT	1.9 UT	19 U		
05R001	LWG0105R001SDS015C00	normal	7.9 UT			0.35 J	0.47	0.4 U	0.82 JT	2 UT	20 U		
05R003	LWG0105R003SDS015C00	normal	250 T			4 UJ	6.4 U	18 U	18 UT	170 T	75		
05R020	LWG0105R020SDS015C00	normal	15 UT			7.6 J	3.8 U	34	41.6 JT	110 T	24		
05R040	LWG0105R040SDS015C00	normal	9.1 UT			26 UJ	10 UJ	44 U	44 UT	1100 T	230 U		
05R041	LWG0105R041SDS015C00	normal	7.4 T			1.7	1.3	1.2 U	3 T	10 T	20 U		
06B022	LWG0106B022SDS015C00	normal	2.5 JT			0.4 U	0.51 U	0.5 U	0.51 UT	11 T	19 U		
06B025	LWG0106B025SDS015C00	normal	29 T			9 U	7.7 U	12 U	12 UT	560 T	98 U		
06B026	LWG0106B026SDS015C00	normal	7.7 UT			0.38 U	0.38 U	0.38 U	0.38 UT	3.8 UT	19 U		
06B029	LWG0106B029SDS015C00	normal	7.7 UT			1.5	1.2 U	1.1 U	1.5 T	4.9 T	19 U		
06B030	LWG0106B030SDS015C00	normal	16 T			0.49 U	2.3 U	1.8 U	2.3 UT	3.8 UT	19 U		
06R001	LWG0106R001SDS015C00	normal	27 JT			5.3	3.3	9	17.6 T	100 T	20 U		
06R002	LWG0106R002SDS015C10	normal	75 UT	1.44 NJT	58 T	2.4 U	2.1 U	8.9 U	8.9 UT	34 T	21		
06R002	LWG0106R002SDS015C20	field rep	20 UT	1.46 NJ	103 T	2.5 U	1.6 U	3.8 U	3.8 UT	44 T	69		
06R002	LWG0106R002SDS015C31	field rep	24 UT	1.28 NJT	45.6 T	2.6 UJT	1.3 UT	5.8 UT	5.8 UT	24.5 T	19 UT		
06R004	LWG0106R004SDS015C00	normal	100 UT	0.202 NJ	5.55 T	17	12	15 J	44 JT	55 T	19 U		
06R031	LWG0106R031SDS015C00	normal	14 UT			22 J	11	34	67 JT	1500 T	82		

Table F-1. Round 1 Sediment Data.

		Chemical Name	Arsenic	Cadmium	Copper	Lead	Mercury	Nickel	Zinc	Tributyltin ion	Bis(2-ethylhexyl) phthalate	High Molecular Weight PAH*	Low Molecular Weight PAH*
		Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample	Type											
06R040	LWG0106R040SDS015C00	normal	4.4	0.1	45.6	26 J	0.52	28	97.6		84	80700 T	22400 T
07B022	LWG0107B022SDS015C00	normal	2	0.05	15.9	9	0.04 U	20	64		27	48.5 T	20 UT
07B023	LWG0107B023SDS015C00	normal	0.7	0.09	69.6	15	0.05 U	21 J	97		69	161 JT	19 UT
07B024	LWG0107B024SDS015C00	normal	1.55 T	0.075 T	20.6 T	16.5 T	0.04 UT	37 JT	80 T		59	468 T	35 T
07R003	LWG0107R003SDS015C00	normal	1.8	0.13	27.4	17 J	0.08 UJ	19	79.1		250	1080 JT	118 T
07R004	LWG0107R004SDS015C00	normal	6.1	0.09	32.7	9.9 J	0.06 UJ	17	86		110	33700 JT	5220 JT
07R006	LWG0107R006SDS015C00	normal	4.4	0.17	110	330 J	0.07 UJ	65	112		320	13100 JT	491 T
07R030	LWG0107R030SDS015C00	normal	1.6	0.09	18.8	14.1 J	0.06	19	69.7		75	432 JT	32 T
07R040	LWG0107R040SDS015C00	normal	2.6	0.19	62.2	12.8 J	0.1 U	28	105		540	295 T	34 T
08B032	LWG0108B032SDS015C00	normal	2.2	0.07	23.9	10.2	0.06 U	21 J	71.7		45	162 JT	19 UT
08R001	LWG0108R001SDS015C00	normal	2.3	0.25	47.1	19 J	0.1 J	23	119		480	3020 JT	375 T
08R002	LWG0108R002SDS015C00	normal	2.7	0.17	23	15	0.05 U	19	108		100 U	324 T	38 T
08R003	LWG0108R003SDS015C00	normal	2.4	0.14	113	27 J	0.15 J	22	149		1200	948 JT	126 T
08R040	LWG0108R040SDS015C00	normal	4.8	0.54	101	45 J	0.18	24	267		1300	6810 T	1150 T
08R041	LWG0108R041SDS015C00	normal	2.4	0.24	43.1	23 J	0.1	25	105		71	445 T	32 T
09B024	LWG0109B024SDS015C00	normal	1.1	0.04 J	18.2	4.7	0.04 U	19 J	55		49	177 JT	32 T
09B026	LWG0109B026SDS015C00	normal	2.4	0.05	18.3	11	0.05 U	17 J	121		53	10.3 T	19 UT
09B027	LWG0109B027SDS015C10	normal	1.3 T	0.065 T	22.5 T	8.95 T	0.04 UT	21 T	69 T		21	90.8 T	20 UT
09B027	LWG0109B027SDS015C20	field rep	1.4	0.07	24	7.6	0.06 U	21	71		33	40.1 T	19 UT
09B027	LWG0109B027SDS015C31	field rep	1.3 T	0.09 T	22 T	11.1 T	0.06 UT	18 T	60.2 T		42 T	112 T	19 UT
09B028	LWG0109B028SDS015C00	normal	1.3	0.03	18.9	12	0.05 U	26	78		68	57.4 T	19 UT
09R001	LWG0109R001SDS015C10	normal	8.55 T	0.235 T	69.2 T	42.5 JT	0.16 T	16.5 T	163 T		1000	6980 JT	2960 T
09R001	LWG0109R001SDS015C20	field rep	8.9	0.39	90.6	39 J	0.15	17	192		640	1900 T	311 T
09R001	LWG0109R001SDS015C31	field rep	7.2 T	0.63 T	103 T	51 JT	0.385 T	23.5 T	303 T		2550 T	10300 T	1080 T
09R002	LWG0109R002SDS015C00	normal	3.8	2	49.6	33 J	0.07 U	20	226		2500	3600 JT	380 T
09R040	LWG0109R040SDS015C00	normal	2.5	0.16	41.7	12.7 J	0.1 U	28	95		440	578 T	73 T
09R041	LWG0109R041SDS015C00	normal	1.5	0.12	30.6	9.8 J	0.07 U	28	86		250	270 T	29 T

* Summed analyte values are for nature and extent presentation purposes only.

TEQ calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table F-1. Round 1 Sediment Data.

Location	Sample	Chemical Name / Unit / Type	Polychlorinated biphenyls* ug/kg	2,3,7,8-TCDD pg/g	2,3,7,8-TCDD TEQ* pg/g	4,4'-DDD ug/kg	4,4'-DDE ug/kg	4,4'-DDT ug/kg	Total pp-DDTs* ug/kg	Dibenzofuran ug/kg	4-Methylphenol ug/kg	o-Xylene ug/kg	m,p-Xylene ug/kg
06R040	LWG0106R040SDS015C00	normal	42 T			4.9			4.9 T	240 T	20 U		
07B022	LWG0107B022SDS015C00	normal	7.9 UT			1.1	0.39 U	0.84	1.94 T	4 UT	20 U		
07B023	LWG0107B023SDS015C00	normal	25 UT			24	20	46	90 T	1.9 UT	19 U		
07B024	LWG0107B024SDS015C00	normal	46 UT			40	78	94	212 T	9.5 UT	19 U		
07R003	LWG0107R003SDS015C00	normal	2600 UT			130 U	130 U	200	200 T	5.8 UT	19 U		
07R004	LWG0107R004SDS015C00	normal	14 T			0.81 UJ	1.6 U	1.2 U	1.6 UT	110 T	34		
07R006	LWG0107R006SDS015C00	normal	2200 UT	5.44 J	16600 T	930	330	9300	10600 T	15 T	19 U		
07R030	LWG0107R030SDS015C00	normal	8.4 T			16	2.4	4.2 U	18.4 T	5.9 UT	20 U		
07R040	LWG0107R040SDS015C00	normal	9.4 UT			0.71 U	1.8	1 U	1.8 T	7.2 UT	21		
08B032	LWG0108B032SDS015C00	normal	16.8 JT			0.39 U	0.39 U	1.1 U	1.1 UT	1.9 UT	19 U		
08R001	LWG0108R001SDS015C00	normal	14 T			2	3	2.9 UJ	5 T	16 T	80	0.18 UJT	0.37 UJT
08R002	LWG0108R002SDS015C00	normal	22.5 T			0.92 U	1.3 U	1.2 U	1.3 UT	5.8 UT	19 U		
08R003	LWG0108R003SDS015C00	normal	37 T	0.135 UJ	5.5 T	1.8 UJ	1 U	2.3 U	2.3 UT	7.1 T	23		
08R040	LWG0108R040SDS015C00	normal	360 T			3.4 U	8.9 U	0.39 U	8.9 UT	48 T	83		
08R041	LWG0108R041SDS015C00	normal	77 JT			6.9	18	3.2 U	24.9 T	8.8 T	20 U		
09B024	LWG0109B024SDS015C00	normal	9.1 JT			0.39 U	0.38 U	0.38 U	0.39 UT	1.9 UT	19 U		
09B026	LWG0109B026SDS015C00	normal	7.8 UT			0.39 U	0.39 U	0.39 U	0.39 UT	1.9 UT	19 U		
09B027	LWG0109B027SDS015C10	normal	10 T			0.39 U	0.77 U	0.94 U	0.94 UT	2 UT	20 U		
09B027	LWG0109B027SDS015C20	field rep	80 T			0.73 U	1.2 U	2.6 U	2.6 UT	1.9 UT	19 U		
09B027	LWG0109B027SDS015C31	field rep	19.5 T			0.39 UT	0.79 UT	1.1 UT	1.1 UT	1.9 UT	19 UT		
09B028	LWG0109B028SDS015C00	normal	3.7 JT			0.39 U	0.39 U	0.39 U	0.39 UT	3.8 UT	19 U		
09R001	LWG0109R001SDS015C10	normal	31 UT			1.8 U	1.8 UJ	3 U	3 UT	160 T	160		
09R001	LWG0109R001SDS015C20	field rep	21 T			1.6 UJ	2 UJ	3.3 U	3.3 UT	20 T	84		
09R001	LWG0109R001SDS015C31	field rep	145 JT			2.9 UT	4.4 UT	7.8 UT	7.8 UT	54 JT	175 T		
09R002	LWG0109R002SDS015C00	normal	98 T	0.493 NJ	20 T	2.1 U	2.7 U	8.3 U	8.3 UT	31 JT	78		
09R040	LWG0109R040SDS015C00	normal	6.6 T			0.54 U	1.2	0.91 U	1.2 T	5.9 UT	24		
09R041	LWG0109R041SDS015C00	normal	42 T			0.81 U	1 U	5.2 U	5.2 UT	1.9 UT	26		

* Summed analyte values are for nature and extent presentation purposes only.

TEQ calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table F-2. Round 1 Tissue Data

Location	Sample	Species	Chemical Name / Unit / Tissue	Arsenic mg/kg	Cadmium mg/kg	Copper mg/kg	Lead mg/kg	Mercury mg/kg	Nickel mg/kg	Zinc mg/kg	Tributyltin ion ug/kg	Bis(2-ethylhexyl) ug/kg	High Molecular Weight PAH* ug/kg
02R001	LWG0102R001TSCRWBC00	crayfish	whole-body	0.37 J	0.028 J	12.5 J	0.059 J	0.024	0.54 J	16.6 J		100 UJT	33 UT
02R001	LWG0102R001TSSPWBC00	sculpin	whole-body	0.22	0.008 J	1.05	0.0837 J	0.05	0.19	14.1		92 UT	31 UT
02R001	LWG0102R001TSSPWBC10	sculpin	whole-body					0.07					
02R015	LWG0102R015TSCRWBC00	crayfish	whole-body	0.4 J	0.017 J	11.2 J	0.078 J	0.023	0.47 J	15.9 J		100 UJT	33 UT
02R015	LWG0102R015TSSPWBC00	sculpin	whole-body	0.27	0.022	1.2	0.181 J	0.029	0.23	16.3		400 UT	33 UT
02R102	LWG1A02R102TSSCWBC00	juvenile chinook	whole-body	0.13	0.027	2.15	0.015 J	0.02	0.492 J	31.1		95 UT	32 UT
02R112	LWG1A02R112TSSCWBC00	juvenile chinook	whole-body	0.19	0.017	1.84	0.009 UJ	0.016	0.439 J	33.3		95 UT	32 UT
02R113	LWG1A02R113TSSCWBC00	juvenile chinook	whole-body	0.2	0.024	1.5	0.008 UJ	0.017	0.299 J	33.3		490 UT	33 UT
03R001	LWG0103R001TSCRWBC00	crayfish	whole-body	0.35 J	0.016 J	12.3 J	0.069 J	0.024	0.3 J	17.6 J		99 UJT	33 UT
03R001	LWG0103R001TSSPWBC00	sculpin	whole-body	0.21	0.011 J	1.3	0.027	0.029	0.327	13.6		150 UT	31 UT
03R002	LWG0103R002TSCRWBC00	crayfish	whole-body	0.41 J	0.018 J	14.7 J	0.044 J	0.027	0.36 J	17.5 J		100 UJT	33 UT
03R002	LWG0103R002TSSPWBC10	sculpin	whole-body	0.24	0.005 J	1.37	0.017	0.027	0.282	14.1		180 UT	31 UT
03R002	LWG0103R002TSSPWBC20	sculpin	whole-body	0.22	0.007 J	1.28	0.0241 J	0.046	0.23	14.3		96 UT	32 UT
03R003	LWG0103R003TSCRWBC00	crayfish	whole-body	0.38 J	0.029 J	17 J	0.088 J	0.029	0.42 J	19.8 J		100 UJT	93 UT
03R004	LWG0103R004TSCRWBC00	crayfish	whole-body	0.36 J	0.02 J	15.8 J	0.1 J	0.025	0.4 J	18.2 J		150 UJT	93 UT
03R004	LWG0103R004TSSPWBC10	sculpin	whole-body	0.23	0.019	1.15	0.0681 J	0.034	0.13 U	15.4		810 UT	33 UT
03R004	LWG0103R004TSSPWBC20	sculpin	whole-body	0.23	0.012 J	0.929	0.131 J	0.025	0.08 U	14		140 UT	32 UT
03R005	LWG0103R005TSCRWBC00	crayfish	whole-body	0.3 J	0.03 J	11.8 J	0.154 J	0.022	0.3 J	14.8 J		100 UJT	96 UT
03R005	LWG0103R005TSSPWBC00	sculpin	whole-body	0.19	0.011	1.01	0.0791 J	0.036	0.19	15.9		160 UT	30 UT
03R014	LWG0103R014TSLSWBC10	largescale sucker	whole-body	0.27	0.023 J	0.905	0.175	0.066 T	0.39	17.9		78 UT	26 UT
03R014	LWG0103R014TSLSWBC20	largescale sucker	whole-body	0.23	0.017 J	0.735	0.064	0.045	0.29	17.4		99 UT	33 UT
03R014	LWG0103R014TSNPWBC10	northern pikeminnow	whole-body	0.36	0.011 J	0.6	0.007 U	0.173	0.2 J	19.4			
03R014	LWG0103R014TSNPWBC20	northern pikeminnow	whole-body	0.36 T	0.0115 JT	0.575 T	0.005 UT	0.146 T	0.291 JT	17.5 T			
03R014	LWG0103R014TSPMWBC00	peamouth	whole-body	0.42	0.028	1.61	10.6	0.035	0.482 J	23.5			
03R014	LWG0103R014TSSBFLC00	smallmouth bass	fillet	0.28	0.001 U	0.935	0.003 U		0.124	8 J			
03R014	LWG0103R014TSSBFSC00	smallmouth bass	fillet, skinless					0.129 T					
03R014	LWG0103R014TSSBWBC00	smallmouth bass	whole-body	0.39	0.008 J	0.375	0.006	0.096	0.08	16.3		1300 UT	31 UT
03R032	LWG0103R032TSCRWBC00	crayfish	whole-body	0.45 J	0.012 J	13.1 J	0.041 J	0.028	0.38 J	17.4 J		170 UJT	33 UT
03R032	LWG0103R032TSSPWBC00	sculpin	whole-body	0.3	0.004 J	1.14	0.0149 J	0.028	0.09 U	15.2		86 UT	29 UT
03R034	LWG0103R034TSSPWBC00	sculpin	whole-body	0.15	0.007 J	1.25	0.0348 J	0.043	0.16	15.8		150 UT	31 UT
03R118	LWG1A03R118TSSCWBC00	juvenile chinook	whole-body	0.2	0.013	1.09	0.01 J	0.018	0.209 J	29.6		98 UT	33 UT
03R125	LWG1A03R125TSSCWBC00	juvenile chinook	whole-body	0.25	0.013	1.28	0.006 UJ	0.017	0.242 J	29.6		170 UT	31 UT
04R002	LWG0104R002TSCRWBC00	crayfish	whole-body	0.39 JT	0.022 JT	15.4 JT	1.3 JT	0.0345 T	0.275 JT	17 JT		100 UJT	93 UT
04R002	LWG0104R002TSSPWBC00	sculpin	whole-body	0.14	0.017	0.934	0.96 J	0.037	0.09 U	18		240 UT	30 UT
04R003	LWG0104R003TSCRWBC00	crayfish	whole-body	0.37 J	0.025 J	15.4 J	0.229 J	0.022	0.25 UJ	17 J		100 UJT	93 JT
04R003	LWG0104R003TSSPWBC00	sculpin	whole-body	0.17	0.012 J	1.02	0.255 J	0.032	0.18	16.4		260 UT	32 UT
04R004	LWG0104R004TSCRWBC10	crayfish	whole-body	0.39 J	0.013 J	11.9 J	0.097 J	0.037	0.39 J	15.7 J		100 UJT	93 UT
04R004	LWG0104R004TSCRWBC20	crayfish	whole-body	0.35 J	0.012 J	11.5 J	0.107 J	0.025	0.22 J	13.7 J		99 UJT	170 T
04R004	LWG0104R004TSSPWBC00	sculpin	whole-body	0.24	0.008 J	1.09	0.365 U	0.04	0.13 U	15.4		9400 JT	28 UT
04R023	LWG0104R023TSSBWBC10	smallmouth bass	whole-body	0.34	0.003 J	0.399	0.005 J	0.114	0.1	14		32000 JT	31 UT
04R023	LWG0104R023TSSBWBC20	smallmouth bass	whole-body	0.32	0.004 J	0.365	0.006 J	0.076	0.15	15.2		690 UT	30 UT
04R023	LWG0104R023TSSBWBC30	smallmouth bass	whole-body	0.31	0.008 J	0.61	0.054	0.063	0.2	13.4		87000 JT	75 T
04R126	LWG1A04R126TSSCWBC00	juvenile chinook	whole-body	0.16	0.011 J	1.15	0.014 J	0.019	0.239 J	31.5		860 UT	33 UT
05R001	LWG0105R001TSCRWBC00	crayfish	whole-body	0.35 J	0.009 J	13.1 J	0.083 J	0.031	0.29 J	15.9 J		99 UJT	33 UT
05R001	LWG0105R001TSSPWBC00	sculpin	whole-body	0.24	0.006 J	1.23	0.021	0.026	0.283	13.9		96 UT	32 UT
05R003	LWG0105R003TSCRWBC00	crayfish	whole-body	0.35 J	0.036 J	16.9 J	0.11 J	0.039	0.59 J	18.9 J		100 UJT	33 UT
05R006	LWG0105R006TSLSWBC00	largescale sucker	whole-body	0.27	0.02 J	0.909	0.102	0.079	0.4	17.7		97 UT	32 UT
05R006	LWG0105R006TSNPWBC00	northern pikeminnow	whole-body	0.24	0.012 J	0.6	0.008	0.326	0.181 J	16.4			

Table F-2. Round 1 Tissue Data

Location	Sample	Species	Chemical Name / Unit / Tissue	Low Molecular Weight PAH* ug/kg	Polychlorinated biphenyls* ug/kg	2,3,7,8-TCDD pg/g	2,3,7,8-TCDD TEQ* pg/g	4,4'-DDD ug/kg	4,4'-DDE ug/kg	4,4'-DDT ug/kg	Total pp-DDTs* ug/kg	Dibenzofuran ug/kg	4-Methylphenol ug/kg
02R001	LWG0102R001TSCRWBC00	crayfish	whole-body	33 UT	21 JT	0.077	5.01 T	1 U	2.9 N	1.1 U	2.9 T	33 UT	33 UT
02R001	LWG0102R001TSSPWBC00	sculpin	whole-body	31 UT	2330 JT	0.143	44.6 T	14 JT	30 T	6.3 UT	44 JT	31 UT	31 UT
02R001	LWG0102R001TSSPWBC10	sculpin	whole-body										
02R015	LWG0102R015TSCRWBC00	crayfish	whole-body	33 UT	28 JT			1 U	4.1	1 U	4.1 T	33 UT	33 UT
02R015	LWG0102R015TSSPWBC00	sculpin	whole-body	33 UT	3360 T			9.2 JT	28 T	6.3 UT	37.2 JT	33 UT	62 T
02R102	LWG1A02R102TSSCWBC00	juvenile chinook	whole-body	41 UT	30 JT			4.6 N	20	4.4 N	29 T	32 UT	32 UT
02R112	LWG1A02R112TSSCWBC00	juvenile chinook	whole-body	32 UT	100 JT			6 JT	24 T	19 UT	30 JT	32 UT	32 UT
02R113	LWG1A02R113TSSCWBC00	juvenile chinook	whole-body	33 T	32 T			5.2 JT	19 T	19 UT	24.2 JT	33 UT	33 UT
03R001	LWG0103R001TSCRWBC00	crayfish	whole-body	33 UT	5.7 UT			1 U	4.8	1 U	4.8 T	33 UT	33 UT
03R001	LWG0103R001TSSPWBC00	sculpin	whole-body	47 UT	144 JT			5.2 NJ	19 U	16 J	21.2 JT	31 UT	31 UT
03R002	LWG0103R002TSCRWBC00	crayfish	whole-body	33 UT	5.2 UT			1 U	3.8	1 U	3.8 T	33 UT	33 UT
03R002	LWG0103R002TSSPWBC10	sculpin	whole-body	31 UT	121 JT			6.7 N	21 U	19	25.7 T	31 UT	31 UT
03R002	LWG0103R002TSSPWBC20	sculpin	whole-body	45 JT	170 JT			7.2 N	34 U	37	44.2 T	32 UT	32 UT
03R003	LWG0103R003TSCRWBC00	crayfish	whole-body	83 UT	8.5 UT	0.126	2.59 T	1 U	3.5 N	3.4 NJ	6.9 JT	33 UT	110 UT
03R004	LWG0103R004TSCRWBC00	crayfish	whole-body	70 UT	7 UT	0.111	2.37 T	1 U	3.7 N	2.3 NJ	6 JT	66 UT	190 T
03R004	LWG0103R004TSSPWBC10	sculpin	whole-body	33 UT	324 T	0.238	16.8 T	5.7 N	20 UJ	54	59.7 T	33 UT	33 UT
03R004	LWG0103R004TSSPWBC20	sculpin	whole-body	32 UT	305 T			8.3 N	22 NJ	50	80.3 JT	32 UT	32 UT
03R005	LWG0103R005TSCRWBC00	crayfish	whole-body	90 UT	280 T	0.099	5.06 T	1 U	3.5 J	3.1 U	3.5 JT	33 UT	100 UT
03R005	LWG0103R005TSSPWBC00	sculpin	whole-body	30 UT	360 T	0.119	14.6 T	7.7 N	25 NJ	75	108 JT	30 UT	30 UT
03R014	LWG0103R014TSLSWBC10	largescale sucker	whole-body	26 UT	2020 JT			41 T	160 T	17 JT	218 JT	36 UT	26 UT
03R014	LWG0103R014TSLSWBC20	largescale sucker	whole-body	33 UT	350 T			31 J	93	32 J	156 JT	33 UT	33 UT
03R014	LWG0103R014TSNPWBC10	northern pikeminnow	whole-body		710 T			46 T	225 T	6.3 UT	271 T		
03R014	LWG0103R014TSNPWBC20	northern pikeminnow	whole-body		370 T			40.5 T	210 T	6.3 UT	251 T		
03R014	LWG0103R014TSPMWBC00	peamouth	whole-body		147 T			11.1 T	109 T	6.4 JT	127 JT		
03R014	LWG0103R014TSSBFLC00	smallmouth bass	fillet		60 T			4.1 J	25	8.3	37.4 JT		
03R014	LWG0103R014TSSBFSC00	smallmouth bass	fillet, skinless										
03R014	LWG0103R014TSSBWBC00	smallmouth bass	whole-body	31 UT	780 T	0.523	23.1 T	30.5 JT	145 T	15 JT	191 JT	31 UT	31 UT
03R032	LWG0103R032TSCRWBC00	crayfish	whole-body	70 UT	4.5 UT			1 U	3.4	1.5 N	4.9 T	33 UT	110 UT
03R032	LWG0103R032TSSPWBC00	sculpin	whole-body	29 UT	172 T			7.3 N	18 NJ	23 J	48.3 JT	29 UT	29 UT
03R034	LWG0103R034TSSPWBC00	sculpin	whole-body	31 UT	500 T			6.1 UT	24 JT	12 JT	36 JT	31 UT	31 UT
03R118	LWG1A03R118TSSCWBC00	juvenile chinook	whole-body	33 UT	54 T			4.2 J	19	6.4 J	29.6 JT	33 UT	33 UT
03R125	LWG1A03R125TSSCWBC00	juvenile chinook	whole-body	38 UT	58 T			6.3 J	21	7.6 J	34.9 JT	31 UT	31 UT
04R002	LWG0104R002TSCRWBC00	crayfish	whole-body	70 UT	5 UT			1 U	4	1 U	4 T	33 UT	110 UT
04R002	LWG0104R002TSSPWBC00	sculpin	whole-body	30 UT	156 JT			5.6 J	16 NJ	26 J	47.6 JT	30 UT	30 UT
04R003	LWG0104R003TSCRWBC00	crayfish	whole-body	73 UT	4 UT			1.2 NJ	3.9	9.5	14.6 JT	33 UT	120 UT
04R003	LWG0104R003TSSPWBC00	sculpin	whole-body	32 JT	196 JT			5.3 N	14 NJ	21 J	40.3 JT	32 UT	32 UT
04R004	LWG0104R004TSCRWBC10	crayfish	whole-body	70 UT	2 UT			1 U	6.9	1 U	6.9 T	33 UT	110 UT
04R004	LWG0104R004TSCRWBC20	crayfish	whole-body	93 UT	1.7 UT			1 U	2.1	1 U	2.1 T	33 UT	120 UT
04R004	LWG0104R004TSSPWBC00	sculpin	whole-body	31 T	123 JT			12 J	32 NJ	26 J	70 JT	28 UT	28 UT
04R023	LWG0104R023TSSBWBC10	smallmouth bass	whole-body	31 UT	1280 JT	0.66	23.6 T	47 T	220 T	27 T	294 T	31 UT	31 UT
04R023	LWG0104R023TSSBWBC20	smallmouth bass	whole-body	30 UT	470 T	0.515	14.2 T	33.5 JT	140 T	6.3 UT	174 JT	30 UT	30 UT
04R023	LWG0104R023TSSBWBC30	smallmouth bass	whole-body	36 T	590 JT	0.449	14.3 T	31 JT	99.5 JT	6.3 UT	131 JT	30 UT	30 UT
04R126	LWG1A04R126TSSCWBC00	juvenile chinook	whole-body	33 UT	61 T			8.1 J	24	7.4 J	39.5 JT	33 UT	33 UT
05R001	LWG0105R001TSCRWBC00	crayfish	whole-body	69 UT	4 UT			1 U	5.2	1 U	5.2 T	33 UT	33 UT
05R001	LWG0105R001TSSPWBC00	sculpin	whole-body	32 UT	196 JT			6.1 UT	16 JT	6.3 UT	16 JT	32 UT	32 UT
05R003	LWG0105R003TSCRWBC00	crayfish	whole-body	70 UT	27 T			1 U	6.6	1 U	6.6 T	33 UT	120 UT
05R006	LWG0105R006TSLSWBC00	largescale sucker	whole-body	42 JT	95 T			20	79	27	126 T	39 UT	32 UT
05R006	LWG0105R006TSNPWBC00	northern pikeminnow	whole-body		440 T			48 T	305 T	6.3 UT	353 T		

Table F-2. Round 1 Tissue Data

			Chemical Name	Arsenic	Cadmium	Copper	Lead	Mercury	Nickel	Zinc	Tributyltin ion	Bis(2-ethylhexyl)	High Molecular Weight PAH*
			Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg
Location	Sample	Species	Tissue										
05R006	LWG0105R006TSPMWBC00	peamouth	whole-body	0.45	0.026	1.45	0.111	0.033	0.448 J	23.1			
05R006	LWG0105R006TSSBFLC00	smallmouth bass	fillet	0.2	0.001 U	1.12	0.011		0.224	10.9 J			
05R006	LWG0105R006TSSBFSC00	smallmouth bass	fillet, skinless					0.087					
05R006	LWG0105R006TSSBWBC00	smallmouth bass	whole-body	0.3	0.008 J	0.481	0.006 J	0.078	0.07	14.1		92 UT	31 UT
05R020	LWG0105R020TSSPWBC00	sculpin	whole-body	0.24	0.005 J	1.27	0.0203 J	0.036	0.12 U	15.8		170 UT	31 UT
06R001	LWG0106R001TSCRWBC00	crayfish	whole-body	0.32 J	0.011 J	14.9 J	0.071 J	0.041	0.51 J	15 J		100 UJT	100 UT
06R001	LWG0106R001TSSPWBC00	sculpin	whole-body	0.14	0.007 J	1.68	0.0521 J	0.042	0.23	16.3		82 UT	27 UT
06R002	LWG0106R002TSCAWBC00	clam	whole-body	0.842 T	0.053 T	7.94 T	0.0707 T	0.012	0.16 T	23.2 T	7.6	120 UT	84 T
06R002	LWG0106R002TSSPWBC10	sculpin	whole-body	0.22	0.007 J	1.22	0.194	0.047	0.312	14.1		99 T	33 UT
06R002	LWG0106R002TSSPWBC20	sculpin	whole-body	0.22	0.005 J	1.49	0.165	0.069	0.311 J	15.3		260 UT	33 UT
06R004	LWG0106R004TSCRWBC10	crayfish	whole-body	0.38 J	0.017 J	16.4 J	0.088 J	0.034	0.5 J	18.2 J		100 UJT	50 UT
06R004	LWG0106R004TSCRWBC20	crayfish	whole-body	0.35 J	0.02 J	14.2 J	0.082 J	0.029	0.41 J	20.3 J		100 UJT	380 JT
06R004	LWG0106R004TSSPWBC00	sculpin	whole-body	0.18	0.003 J	1.32	0.037	0.031	0.374 J	14.7		200 UT	30 UT
06R024	LWG0106R024TSSBFLC00	smallmouth bass	fillet	0.2	0.001 J	0.248	0.002 U		0.008 J	8.38 J			
06R024	LWG0106R024TSSBFSC00	smallmouth bass	fillet, skinless					0.073					
06R024	LWG0106R024TSSBWBC00	smallmouth bass	whole-body	0.21	0.024 J	0.809	0.011	0.106	0.16	16		96 UT	32 UT
06R031	LWG0106R031TSCRWBC00	crayfish	whole-body	0.26 J	0.007 J	11.4 J	0.077 J	0.029	0.45 J	16.2 J		99 UJT	33 UT
07R003	LWG0107R003TSCAWBC00	clam	whole-body	0.802	0.05	6.85	0.0731	0.011	0.183	21.4		170 UT	142 T
07R003	LWG0107R003TSCRWBC00	crayfish	whole-body	0.3 J	0.015 J	13.8 J	0.091 J	0.03	0.3 J	16 J		100 UT	33 UT
07R003	LWG0107R003TSSPWBC00	sculpin	whole-body	0.17	0.005 J	1.25	0.065	0.086	0.398 J	14		100 UT	29 UT
07R004	LWG0107R004TSCRWBC00	crayfish	whole-body	0.5 J	0.016 J	17.6 J	0.202 J	0.036	0.55 J	19.1 J		120 UT	64 UT
07R006	LWG0107R006TSCAWBC00	clam	whole-body	0.923	0.076	8.36	0.316	0.006 T	0.211	21.6	4.4	340 UT	268 JT
07R006	LWG0107R006TSCRWBC00	crayfish	whole-body	0.32	0.009 J	12.8	0.242	0.024	0.83	15.5		270 UJT	33 UT
07R006	LWG0107R006TSSPWBC00	sculpin	whole-body	0.28	0.007 J	1.21	0.547	0.066	0.386 J	16.8		220 UT	30 UT
07R009	LWG0107R009TSLSWBC00	largescale sucker	whole-body	0.22	0.016 J	0.918	0.076	0.085	0.32	17.8		78 UT	26 UT
07R009	LWG0107R009TSNPWBC00	northern pikeminnow	whole-body	0.21	0.008 J	0.58	0.016	0.494	0.461 J	18.2			
07R009	LWG0107R009TSSBWBC10	smallmouth bass	whole-body	0.29	0.002 J	0.519	0.007	0.1	0.13	14.9		86 UT	29 UT
07R009	LWG0107R009TSSBWBC20	smallmouth bass	whole-body	0.235 T	0.002 UT	0.394 T	0.0335 JT	0.0915 T	0.03 UT	14.2 T		630 UT	25 UT
07R009	LWG0107R009TSSBWBC30	smallmouth bass	whole-body	0.23	0.002 U	0.953	0.0051 J	0.071	0.02 U	16		98 UT	33 UT
08R001	LWG0108R001TSCRWBC00	crayfish	whole-body	0.35	0.013 J	15	0.076	0.022	0.28	15.2		100 UJT	33 UT
08R001	LWG0108R001TSSPWBC00	sculpin	whole-body	0.2	0.009 J	1.58	0.059	0.039	0.338 J	17.5		160 UT	29 UT
08R002	LWG0108R002TSCRWBC00	crayfish	whole-body	0.28	0.013 J	10.4	0.104	0.033	0.32	13.9		230 UT	33 UT
08R002	LWG0108R002TSSPWBC00	sculpin	whole-body	0.19	0.006 J	1.5	0.036	0.043	0.354 J	15.9		100 UT	28 UT
08R003	LWG0108R003TSCRWBC00	crayfish	whole-body	0.28	0.016 J	17	0.076	0.022	0.27	15.7		170 UT	17 UT
08R003	LWG0108R003TSSPWBC00	sculpin	whole-body	0.15	0.004 J	1.38	0.045	0.035	0.352 J	14.5		28000 JT	33 UT
08R010	LWG0108R010TSLSWBC00	largescale sucker	whole-body	0.225 T	0.0325 JT	1.1 T	0.191 T	0.052 T	0.565 T	19.7 T		3000 JT	30 UT
08R010	LWG0108R010TSNPWBC00	northern pikeminnow	whole-body	0.2	0.009 J	0.72	0.009	0.153	0.303 J	20			
08R010	LWG0108R010TSPMWBC00	peamouth	whole-body	0.48	0.021	1.05	0.047	0.031	0.345 J	25.2			
08R010	LWG0108R010TSSBWBC10	smallmouth bass	whole-body	0.2	0.003 J	0.731	0.0075 J	0.076	0.07 U	13.9		99 UT	33 UT
08R010	LWG0108R010TSSBWBC20	smallmouth bass	whole-body	0.17	0.009 J	0.787	0.303 J	0.053	0.07 U	14.1		96 UT	32 UT
08R010	LWG0108R010TSSBWBC30	smallmouth bass	whole-body	0.18	0.004 J	0.952	0.133 J	0.052	0.06 U	14.5		94 UT	31 UT
08R032	LWG0108R032TSSBFLC00	smallmouth bass	fillet	0.18	0.001 J	0.187	0.004 U		0.004 J	8.67 J			
08R032	LWG0108R032TSSBFSC00	smallmouth bass	fillet, skinless					0.113					
08R032	LWG0108R032TSSBWBC00	smallmouth bass	whole-body	0.25	0.003 U	0.464	0.0048 J	0.105	0.02 U	14.9		96 UT	32 UT
09R001	LWG0109R001TSCRWBC10	crayfish	whole-body	0.25	0.02 J	13.8	0.095	0.023	0.18	14.3		160 UT	33 UT
09R001	LWG0109R001TSCRWBC20	crayfish	whole-body	0.34	0.023 J	17.6	0.113	0.02	0.22	17		180 UT	33 UT
09R001	LWG0109R001TSSPWBC00	sculpin	whole-body	0.15	0.016	1.28	0.154	0.039	0.34 J	18		220 UT	27 UT
09R002	LWG0109R002TSCRWBC00	crayfish	whole-body	0.35	0.011 J	13.6	0.098	0.03	0.4	19		200 UT	33 UT

Table F-2. Round 1 Tissue Data

Location	Sample	Species	Tissue (Chemical Name / Unit)	Low Molecular Weight PAH* ug/kg	Polychlorinated biphenyls* ug/kg	2,3,7,8-TCDD pg/g	2,3,7,8-TCDD TEQ* pg/g	4,4'-DDD ug/kg	4,4'-DDE ug/kg	4,4'-DDT ug/kg	Total pp-DDTs* ug/kg	Dibenzofuran ug/kg	4-Methylphenol ug/kg
05R006	LWG0105R006TSPMWBC00	peamouth	whole-body		174 T			24.5 T	110 T	7 T	142 T		
05R006	LWG0105R006TSSBFLC00	smallmouth bass	fillet		46 T			4.2 J	14	6.6	24.8 JT		
05R006	LWG0105R006TSSBFSC00	smallmouth bass	fillet, skinless										
05R006	LWG0105R006TSSBWBC00	smallmouth bass	whole-body	31 JT	390 JT	0.559	12.9 T	35 JT	108 JT	35 T	178 JT	31 UT	31 UT
05R020	LWG0105R020TSSPWBC00	sculpin	whole-body	37 T	132 JT			11 J	27 U	22 J	33 JT	31 UT	31 UT
06R001	LWG0106R001TSCRWBC00	crayfish	whole-body	70 UT	2.6 UT			1 U	4.6	1.1 U	4.6 T	33 UT	33 UT
06R001	LWG0106R001TSSPWBC00	sculpin	whole-body	44 T	62 JT			16 J	29 NJ	27 J	72 JT	27 UT	27 UT
06R002	LWG0106R002TSCAWBC00	clam	whole-body	36 UT	77 T			2.2 N	7.5 N	8.3 U	9.7 T	33 UT	33 UT
06R002	LWG0106R002TSSPWBC10	sculpin	whole-body	40 UT	600 JT	0.357	7.66 T	6.1 UT	19 JT	6.3 UT	19 JT	33 UT	33 UT
06R002	LWG0106R002TSSPWBC20	sculpin	whole-body	42 T	2300 T	0.446 T	19.5 T	12 JT	26 T	11 JT	49 JT	33 UT	33 UT
06R004	LWG0106R004TSCRWBC10	crayfish	whole-body	70 UT	5.8 UT	0.159	2.28 T	2.9 J	8.8	1.5 N	13.2 JT	33 UT	33 UT
06R004	LWG0106R004TSCRWBC20	crayfish	whole-body	97 T	2.6 UT	0.252	1.84 T	9.6 NJ	3.3	1 U	12.9 JT	33 UT	130 UT
06R004	LWG0106R004TSSPWBC00	sculpin	whole-body	132 T	400 JT	0.402	10.5 T	140 JT	230 JT	135 JT	505 JT	33 T	30 UT
06R024	LWG0106R024TSSBFLC00	smallmouth bass	fillet		39 T			5	12	5.6	22.6 T		
06R024	LWG0106R024TSSBFSC00	smallmouth bass	fillet, skinless										
06R024	LWG0106R024TSSBWBC00	smallmouth bass	whole-body	32 UT	252 JT	0.386	9.37 T	19 JT	105 JT	17 JT	141 JT	32 UT	32 UT
06R031	LWG0106R031TSCRWBC00	crayfish	whole-body	73 UT	4.2 UT	0.171	2.78 T	1 U	3.2	1.6 NJ	4.8 JT	33 UT	33 UT
07R003	LWG0107R003TSCAWBC00	clam	whole-body	58 UT	62 JT			30	26	49	105 T	32 UT	32 UT
07R003	LWG0107R003TSCRWBC00	crayfish	whole-body	33 UT	39 T			3.1 J	15 J	14 J	32.1 JT	33 UT	110 UT
07R003	LWG0107R003TSSPWBC00	sculpin	whole-body	29 T	226 JT			84 T	160 T	250 T	494 T	29 UT	29 UT
07R004	LWG0107R004TSCRWBC00	crayfish	whole-body	82 UT	3.5 UT			1 U	6.4	1 U	6.4 T	37 UT	37 UT
07R006	LWG0107R006TSCAWBC00	clam	whole-body	31 UT	120 T			160 T	94.5 T	75 T	330 T	31 UT	31 UT
07R006	LWG0107R006TSCRWBC00	crayfish	whole-body	33 UT	45 JT	0.223	23.8 T	17 NJ	51	10	78 JT	33 UT	33 UT
07R006	LWG0107R006TSSPWBC00	sculpin	whole-body	30 UT	430 JT	0.206	54.1 T	305 T	630 T	1700 T	2640 T	30 UT	30 UT
07R009	LWG0107R009TSLSWBC00	largescale sucker	whole-body	147 JT	1400 T			57 T	96 JT	31 T	184 JT	36 UT	26 UT
07R009	LWG0107R009TSNPWBC00	northern pikeminnow	whole-body		1800 T			43 T	545 T	6.3 UT	588 T		
07R009	LWG0107R009TSSBWBC10	smallmouth bass	whole-body	252 T	430 T	0.77	16 T	58 T	190 T	130 T	378 T	49 T	29 UT
07R009	LWG0107R009TSSBWBC20	smallmouth bass	whole-body	129 T	90 JT	0.713	21 T	55 T	180 T	98 T	333 T	25 UT	25 UT
07R009	LWG0107R009TSSBWBC30	smallmouth bass	whole-body	308 T	780 JT	1.49	18 T	110 T	160 T	35 T	305 T	52 T	33 UT
08R001	LWG0108R001TSCRWBC00	crayfish	whole-body	33 UT	59 T			1 UJ	6.3 J	4.1 UJ	6.3 JT	33 UT	33 T
08R001	LWG0108R001TSSPWBC00	sculpin	whole-body	32 T	187 T			6.1 UT	29 T	8.9 JT	37.9 JT	29 UT	29 UT
08R002	LWG0108R002TSCRWBC00	crayfish	whole-body	33 UT	16 T			1 UJ	3 J	1 UJ	3 JT	33 UT	33 UT
08R002	LWG0108R002TSSPWBC00	sculpin	whole-body	28 UT	157 T			4.6 NJ	18 U	21 J	25.6 JT	28 UT	28 UT
08R003	LWG0108R003TSCRWBC00	crayfish	whole-body	53 UT	43 T	0.176	2.12 T	1 UJ	3.4 NJ	2.4 UJ	3.4 JT	17 UT	17 UT
08R003	LWG0108R003TSSPWBC00	sculpin	whole-body	41 T	480 JT	0.168	7.03 T	6.1 UT	18 JT	6.3 UT	18 JT	29 UT	29 UT
08R010	LWG0108R010TSLSWBC00	largescale sucker	whole-body	30 UT	320 T			150 T	185 T	245 T	580 T	30 UT	30 UT
08R010	LWG0108R010TSNPWBC00	northern pikeminnow	whole-body		670 T			17 NJ	82	53 J	152 JT		
08R010	LWG0108R010TSPMWBC00	peamouth	whole-body		138 T			25 JT	125 JT	6.3 UJT	150 JT		
08R010	LWG0108R010TSSBWBC10	smallmouth bass	whole-body	40 T	4500 JT	0.917	38.1 T	11 JT	92.5 JT	7.3 JT	111 JT	33 UT	33 UT
08R010	LWG0108R010TSSBWBC20	smallmouth bass	whole-body	45 T	3300 JT	0.592	17.1 T	12 JT	53 JT	6.3 UT	65 JT	32 UT	32 UT
08R010	LWG0108R010TSSBWBC30	smallmouth bass	whole-body	31 UT	1000 T	0.716	29.9 T	25.5 T	81.5 JT	6.3 UT	107 JT	31 UT	31 UT
08R032	LWG0108R032TSSBFLC00	smallmouth bass	fillet		93 T			2.7 J	16	10	28.7 JT		
08R032	LWG0108R032TSSBFSC00	smallmouth bass	fillet, skinless										
08R032	LWG0108R032TSSBWBC00	smallmouth bass	whole-body	32 UT	880 JT	0.771	15.2 T	25 JT	128 JT	26 T	179 JT	32 UT	32 UT
09R001	LWG0109R001TSCRWBC10	crayfish	whole-body	33 UT	46 T			1 UJ	1.6 J	2.9 UJ	1.6 JT	33 UT	33 UT
09R001	LWG0109R001TSCRWBC20	crayfish	whole-body	33 UT	49 T			1 UJ	1.9 NJ	2.9 UJ	1.9 JT	33 UT	33 UT
09R001	LWG0109R001TSSPWBC00	sculpin	whole-body	27 UT	510 JT			4 UT	24 JT	19 JT	43 JT	27 UT	27 UT
09R002	LWG0109R002TSCRWBC00	crayfish	whole-body	33 UT	110 T	0.228	2.2 T	1 UJ	2.5 J	4.7 UJ	2.5 JT	33 UT	33 UT

Table F-2. Round 1 Tissue Data

Location	Sample	Species	Chemical Name / Unit / Tissue	Arsenic mg/kg	Cadmium mg/kg	Copper mg/kg	Lead mg/kg	Mercury mg/kg	Nickel mg/kg	Zinc mg/kg	Tributyltin ion ug/kg	Bis(2-ethylhexyl) ug/kg	High Molecular Weight PAH* ug/kg
09R002	LWG0109R002TSSPWBC00	sculpin	whole-body	0.13	0.019	1.25	0.105	0.039	0.326	15.5		120 UT	31 UT
09R006	LWG0109R006TSLSWBC00	largescale sucker	whole-body	0.18	0.015 J	0.841	0.125	0.079	0.81	17.1		800 T	26 UT
09R006	LWG0109R006TSNPWBC00	northern pikeminnow	whole-body	0.19	0.007 J	0.89	0.014	0.39	0.119 J	16.6			
09R006	LWG0109R006TSPMWBC00	peamouth	whole-body	0.35	0.053	0.73	0.031	0.054	0.27 J	24.7			
09R006	LWG0109R006TSSBFLC00	smallmouth bass	fillet	0.19	0.001 U	0.213	0.003 U		0.005 J	9.6 J			
09R006	LWG0109R006TSSBFSC00	smallmouth bass	fillet, skinless					0.071					
09R006	LWG0109R006TSSBWBC00	smallmouth bass	whole-body	0.27	0.002 U	1.29	0.0109 J	0.082	0.04 U	14.5		96 UT	32 UT
FZ0306	LWG01FZ0306TSBBFLC10	brown bullhead	fillet, skinless	0.02 J	0.001 J	0.292	0.002 U		0.019 J	5.51 J		100 T	96 UT
FZ0306	LWG01FZ0306TSBBFLC20	brown bullhead	fillet, skinless	0.02 J	0.001 J	0.203	0.002 U		0.055	6.49 J		100 UT	110 UT
FZ0306	LWG01FZ0306TSBBFLC30	brown bullhead	fillet, skinless	0.02 J	0.001 J	0.25	0.002 U		0.009 J	4.75 J		100 UT	110 T
FZ0306	LWG01FZ0306TSBBFSC10	brown bullhead	fillet, skinless					0.057					
FZ0306	LWG01FZ0306TSBBFSC20	brown bullhead	fillet, skinless					0.044					
FZ0306	LWG01FZ0306TSBBFSC30	brown bullhead	fillet, skinless					0.035					
FZ0306	LWG01FZ0306TSBBWBC10	brown bullhead	whole-body	0.04 J	0.013	0.586	0.026	0.029	0.213 J	12.7		99 UT	33 UT
FZ0306	LWG01FZ0306TSBBWBC20	brown bullhead	whole-body	0.06 J	0.014	0.599	0.026	0.035	0.29 J	14.9		99 UT	33 UT
FZ0306	LWG01FZ0306TSBBWBC30	brown bullhead	whole-body	0.05 J	0.014	0.711	0.026	0.054	0.321 J	14.1		2700 T	40 T
FZ0306	LWG01FZ0306TSBCFLC10	black crappie	fillet	0.13	0.001 U	0.166	0.002 U		0.064	9.03			
FZ0306	LWG01FZ0306TSBCFLC20	black crappie	fillet	0.1 J	0.001 J	0.184	0.005 U		0.057	7.45			
FZ0306	LWG01FZ0306TSBCFSC10	black crappie	fillet, skinless					0.067					
FZ0306	LWG01FZ0306TSBCFSC20	black crappie	fillet, skinless					0.086					
FZ0306	LWG01FZ0306TSBCWBC10	black crappie	whole-body	0.22	0.003 J	0.946	0.004 UJ	0.033	0.338 J	15.5			
FZ0306	LWG01FZ0306TSBCWBC20	black crappie	whole-body	0.185 T	0.0035 JT	0.923 T	0.0185 JT	0.0365 T	0.33 JT	14.2 T			
FZ0306	LWG01FZ0306TSCPFLC10	carp	fillet	0.16	0.004 J	0.313	0.008 U		0.012 J	29.8 J			
FZ0306	LWG01FZ0306TSCPFLC20	carp	fillet	0.05 J	0.005 J	0.376	0.004 U		0.087	17.4 J			
FZ0306	LWG01FZ0306TSCPFLC30	carp	fillet	0.12 J	0.002 J	0.335	0.012		0.002 U	23.8 J			
FZ0306	LWG01FZ0306TSCPFSC10	carp	fillet, skinless					0.191 T					
FZ0306	LWG01FZ0306TSCPFSC20	carp	fillet, skinless					0.185					
FZ0306	LWG01FZ0306TSCPFSC30	carp	fillet, skinless					0.132					
FZ0306	LWG01FZ0306TSCPWBC10	carp	whole-body	0.16	0.061	1.04	0.17 J	0.043	0.834 J	87.1		96 UT	32 UT
FZ0306	LWG01FZ0306TSCPWBC20	carp	whole-body	0.21	0.057	1.04	0.148 J	0.039	1.37 J	96.7		99 UT	33 UT
FZ0306	LWG01FZ0306TSCPWBC30	carp	whole-body	0.22	0.108	1.42	0.132 J	0.042	0.75 J	88.1		97 UT	32 UT
FZ0609	LWG01FZ0609TSBBFLC10	brown bullhead	fillet, skinless	0.02 J	0.001 J	0.251	0.005 U		0.008 J	5.32 J		100 UT	33 UT
FZ0609	LWG01FZ0609TSBBFLC20	brown bullhead	fillet, skinless	0.02 J	0.001 J	0.252	0.003 U		0.003 J	5.32 J		220 UT	33 UT
FZ0609	LWG01FZ0609TSBBFLC30	brown bullhead	fillet, skinless	0.02 J	0 U	0.256	0.008 U		0.029 J	3.96 J		100 UT	33 UT
FZ0609	LWG01FZ0609TSBBFSC10	brown bullhead	fillet, skinless					0.074					
FZ0609	LWG01FZ0609TSBBFSC20	brown bullhead	fillet, skinless					0.094					
FZ0609	LWG01FZ0609TSBBFSC30	brown bullhead	fillet, skinless					0.061					
FZ0609	LWG01FZ0609TSBBWBC10	brown bullhead	whole-body	0.045 JT	0.0085 JT	0.774 T	0.0435 T	0.025 T	0.328 UJT	14.4 T		99 UT	46 UT
FZ0609	LWG01FZ0609TSBBWBC20	brown bullhead	whole-body	0.06 J	0.012 J	0.798	0.023	0.031	0.261 J	15.6		98 UT	49 UT
FZ0609	LWG01FZ0609TSBBWBC30	brown bullhead	whole-body	0.08 J	0.008 J	0.67	0.014 U	0.046	0.236 J	12.9		100 UT	33 UT
FZ0609	LWG01FZ0609TSBCFLC10	black crappie	fillet	0.15	0.001 U	0.178	0.001 U		0.001 U	8.69			
FZ0609	LWG01FZ0609TSBCFLC20	black crappie	fillet	0.18 T	0.001 JT	0.184 T	0.001 UT		0.001 UT	7.75 T			
FZ0609	LWG01FZ0609TSBCFSC10	black crappie	fillet, skinless					0.101					
FZ0609	LWG01FZ0609TSBCFSC20	black crappie	fillet, skinless					0.09					
FZ0609	LWG01FZ0609TSBCWBC10	black crappie	whole-body	0.29	0.006 J	0.721	0.005 UJ	0.044	0.347 J	16.8			
FZ0609	LWG01FZ0609TSBCWBC20	black crappie	whole-body	0.42	0.003 J	0.688	0.007 UJ	0.044	0.357 J	15.1			
FZ0609	LWG01FZ0609TSCPFLC10	carp	fillet	0.1 J	0.002 J	0.497	0.057		0.023 J	19.8			
FZ0609	LWG01FZ0609TSCPFLC20	carp	fillet	0.08 JT	0.0035 JT	0.427 T	0.004 UT		0.057 T	24.6 JT			

Table F-2. Round 1 Tissue Data

Location	Sample	Species	Chemical Name / Unit / Tissue	Low Molecular Weight PAH* ug/kg	Polychlorinated biphenyls* ug/kg	2,3,7,8-TCDD pg/g	2,3,7,8-TCDD TEQ* pg/g	4,4'-DDD ug/kg	4,4'-DDE ug/kg	4,4'-DDT ug/kg	Total pp-DDTs* ug/kg	Dibenzofuran ug/kg	4-Methylphenol ug/kg
09R002	LWG0109R002TSSPWBC00	sculpin	whole-body	100 UT	670 T	0.256	15.6 T	9.6 U	11 U	81	81 T	31 UT	31 UT
09R006	LWG0109R006TSLSWBC00	largescale sucker	whole-body	26 UT	730 T			27.5 JT	115 T	6.3 UT	143 JT	26 UT	26 UT
09R006	LWG0109R006TSNPWBC00	northern pikeminnow	whole-body		1010 T			6.1 UT	145 T	6.3 UT	145 T		
09R006	LWG0109R006TSPMWBC00	peamouth	whole-body		290 T			29.5 T	185 T	6.3 UT	215 T		
09R006	LWG0109R006TSSBFLC00	smallmouth bass	fillet		72 T			1.9 N	13	6.2 J	21.1 JT		
09R006	LWG0109R006TSSBFSC00	smallmouth bass	fillet, skinless										
09R006	LWG0109R006TSSBWBC00	smallmouth bass	whole-body	32 UT	840 JT	1.07	23.6 T	37.5 T	140 T	6.3 UT	178 T	32 UT	32 UT
FZ0306	LWG01FZ0306TSBBFLC10	brown bullhead	fillet, skinless	96 UT	53 T			2.1 J	11	5.1 J	18.2 JT	33 UT	33 UT
FZ0306	LWG01FZ0306TSBBFLC20	brown bullhead	fillet, skinless	110 JT	37 T			2.7 J	9.9 J	3.9 J	16.5 JT	70 UT	33 UT
FZ0306	LWG01FZ0306TSBBFLC30	brown bullhead	fillet, skinless	140 T	56 T			3.8 J	15 J	4.6 J	23.4 JT	80 UT	33 UT
FZ0306	LWG01FZ0306TSBBFSC10	brown bullhead	fillet, skinless										
FZ0306	LWG01FZ0306TSBBFSC20	brown bullhead	fillet, skinless										
FZ0306	LWG01FZ0306TSBBFSC30	brown bullhead	fillet, skinless										
FZ0306	LWG01FZ0306TSBBWBC10	brown bullhead	whole-body	33 UT	67 T	0.253	3.65 T	6.9 J	32	5.3 J	44.2 JT	33 UT	33 UT
FZ0306	LWG01FZ0306TSBBWBC20	brown bullhead	whole-body	33 UT	90 T	0.343	6.03 T	9 NJ	70	15 N	94 JT	33 UT	33 UT
FZ0306	LWG01FZ0306TSBBWBC30	brown bullhead	whole-body	60 T	125 T	0.255	9.75 T	7.4 J	42 J	24	73.4 JT	33 UT	33 UT
FZ0306	LWG01FZ0306TSBCFLC10	black crappie	fillet		22.2 T			1.8 J	5.5	1.5 J	8.8 JT		
FZ0306	LWG01FZ0306TSBCFLC20	black crappie	fillet		22.6 T			2.4 J	6.5	1.5 J	10.4 JT		
FZ0306	LWG01FZ0306TSBCFSC10	black crappie	fillet, skinless										
FZ0306	LWG01FZ0306TSBCFSC20	black crappie	fillet, skinless										
FZ0306	LWG01FZ0306TSBCWBC10	black crappie	whole-body		85 T	0.322	4.08 T	7.9 J	38	8.6 J	54.5 JT		
FZ0306	LWG01FZ0306TSBCWBC20	black crappie	whole-body		90 T	0.354	3.86 T	11 J	37 J	10 J	58 JT		
FZ0306	LWG01FZ0306TSCPFLC10	carp	fillet		670 T			33.5 JT	98.5 JT	6.3 UT	132 JT		
FZ0306	LWG01FZ0306TSCPFLC20	carp	fillet		350 T			23 NJ	87 J	39 NJ	149 JT		
FZ0306	LWG01FZ0306TSCPFLC30	carp	fillet		1060 T			38 JT	135 JT	6.3 UT	173 JT		
FZ0306	LWG01FZ0306TSCPFSC10	carp	fillet, skinless										
FZ0306	LWG01FZ0306TSCPFSC20	carp	fillet, skinless										
FZ0306	LWG01FZ0306TSCPFSC30	carp	fillet, skinless										
FZ0306	LWG01FZ0306TSCPWBC10	carp	whole-body	32 UT	300 T	0.457	10.6 T	27 J	81 J	24 J	132 JT	32 UT	32 UT
FZ0306	LWG01FZ0306TSCPWBC20	carp	whole-body	33 UT	6500 JT	0.751	49.9 T	89.5 JT	260 JT	6.3 UT	350 JT	33 UT	33 UT
FZ0306	LWG01FZ0306TSCPWBC30	carp	whole-body	32 UT	230 T	0.586	7.94 T	38 JT	105 JT	6.3 UT	143 JT	32 UT	32 UT
FZ0609	LWG01FZ0609TSBBFLC10	brown bullhead	fillet, skinless	66 UT	117 T			1.4 N	6.6 J	8.4 J	16.4 JT	33 UT	33 UT
FZ0609	LWG01FZ0609TSBBFLC20	brown bullhead	fillet, skinless	33 UT	1300 JT			6.1 UT	12 JT	6.3 UT	12 JT	33 UT	33 UT
FZ0609	LWG01FZ0609TSBBFLC30	brown bullhead	fillet, skinless	33 UT	560 T			6.1 UT	26.5 JT	6.3 UT	26.5 JT	33 UT	33 UT
FZ0609	LWG01FZ0609TSBBFSC10	brown bullhead	fillet, skinless										
FZ0609	LWG01FZ0609TSBBFSC20	brown bullhead	fillet, skinless										
FZ0609	LWG01FZ0609TSBBFSC30	brown bullhead	fillet, skinless										
FZ0609	LWG01FZ0609TSBBWBC10	brown bullhead	whole-body	33 UT	1700 T	0.409	18.9 T	8 JT	29.5 JT	6.3 UT	37.5 JT	33 UT	33 UT
FZ0609	LWG01FZ0609TSBBWBC20	brown bullhead	whole-body	33 UT	130 T	0.346	5.82 T	12	53 NJ	25	90 JT	33 UT	33 UT
FZ0609	LWG01FZ0609TSBBWBC30	brown bullhead	whole-body	33 UT	314 JT	0.522	7.26 T	13	58	46	117 T	33 UT	33 UT
FZ0609	LWG01FZ0609TSBCFLC10	black crappie	fillet		32 T			2.7 J	7.8	2.1 J	12.6 JT		
FZ0609	LWG01FZ0609TSBCFLC20	black crappie	fillet		19.6 T			2 N	7.1	2.3 NJ	11.4 JT		
FZ0609	LWG01FZ0609TSBCFSC10	black crappie	fillet, skinless										
FZ0609	LWG01FZ0609TSBCFSC20	black crappie	fillet, skinless										
FZ0609	LWG01FZ0609TSBCWBC10	black crappie	whole-body		109 T	0.281	3.98 T	11 J	67	15 J	93 JT		
FZ0609	LWG01FZ0609TSBCWBC20	black crappie	whole-body		250 T	0.36	6.52 T	18.5 JT	80.5 T	6.3 UT	99 JT		
FZ0609	LWG01FZ0609TSCPFLC10	carp	fillet		1200 JT			26.5 JT	73 JT	6.3 UT	99.5 JT		
FZ0609	LWG01FZ0609TSCPFLC20	carp	fillet		390 JT			63.5 T	91.5 T	6.3 UT	155 T		

Table F-2. Round 1 Tissue Data

			Chemical Name	Arsenic	Cadmium	Copper	Lead	Mercury	Nickel	Zinc	Tributyltin ion	Bis(2-ethylhexyl)	High Molecular Weight PAH*
			Unit	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	mg/kg	ug/kg	ug/kg	ug/kg
Location	Sample	Species	Tissue										
FZ0609	LWG01FZ0609TSCPFLC30	carp	fillet	0.07 J	0.009 J	0.458	0.004 U		0.04 J	24.5			
FZ0609	LWG01FZ0609TSCPFSC10	carp	fillet, skinless					0.098					
FZ0609	LWG01FZ0609TSCPFSC20	carp	fillet, skinless					0.084					
FZ0609	LWG01FZ0609TSCPFSC30	carp	fillet, skinless					0.074					
FZ0609	LWG01FZ0609TSCPWBC10	carp	whole-body	0.14 J	0.048	1.28	0.202 J	0.039	0.569 J	112		94 UT	31 UT
FZ0609	LWG01FZ0609TSCPWBC20	carp	whole-body	0.14 J	0.068	1.15	0.121 J	0.029	0.545 J	102		96 UT	32 UT
FZ0609	LWG01FZ0609TSCPWBC30	carp	whole-body	0.125 JT	0.0705 T	1.05 T	0.133 JT	0.047 T	0.401 JT	110 T		98 UT	33 UT
FZ0609	LWG1AFZ0609TSCPWB	carp	whole-body					0.0445 T					

* Summed analyte values are for nature and extent presentation purposes only.
TEQ calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table F-2. Round 1 Tissue Data

Location	Sample	Species	Chemical Name / Unit / Tissue	Low Molecular Weight PAH* ug/kg	Polychlorinated biphenyls* ug/kg	2,3,7,8-TCDD pg/g	2,3,7,8-TCDD TEQ* pg/g	4,4'-DDD ug/kg	4,4'-DDE ug/kg	4,4'-DDT ug/kg	Total pp-DDTs* ug/kg	Dibenzofuran ug/kg	4-Methylphenol ug/kg
FZ0609	LWG01FZ0609TSCPFLC30	carp	fillet		1200 JT			43.5 JT	83.5 T	6.3 UT	127 JT		
FZ0609	LWG01FZ0609TSCPFSC10	carp	fillet, skinless										
FZ0609	LWG01FZ0609TSCPFSC20	carp	fillet, skinless										
FZ0609	LWG01FZ0609TSCPFSC30	carp	fillet, skinless										
FZ0609	LWG01FZ0609TSCPWBC10	carp	whole-body	222 JT	690 T	0.741	10.6 T	22.6 JT	145 T	6.3 UT	168 JT	31 UT	31 UT
FZ0609	LWG01FZ0609TSCPWBC20	carp	whole-body	32 UT	1010 T	1.07	15.7 T	57.5 JT	130 T	6.3 UT	188 JT	32 UT	32 UT
FZ0609	LWG01FZ0609TSCPWBC30	carp	whole-body	111 T	1100 T	0.519	13.3 T	44 JT	91.5 JT	6.3 UT	136 JT	33 UT	33 UT
FZ0609	LWG1AFZ0609TSCPWB	carp	whole-body										

* Summed analyte values are for nature and extent presentation purposes only.
TEQ calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table F-3. TEFs

Method Analyte Group	Display Order	CAS No.	Chemical	Short Name	TEF
TEF_WHOlist	1	1746-01-6	2,3,7,8-Tetrachlorodibenzo-p-dioxin	PCD2378	1
TEF_WHOlist	2	40321-76-4	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	PCD12378	1
TEF_WHOlist	3	39227-28-6	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	PCD123478	0.1
TEF_WHOlist	4	19408-74-3	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	PCD123789	0.1
TEF_WHOlist	5	57653-85-7	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	PCD123678	0.1
TEF_WHOlist	6	35822-46-9	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	PCD1234678	0.01
TEF_WHOlist	7	3268-87-9	Octachlorodibenzo-p-dioxin	OCDD	0.0001
TEF_WHOlist	8	51207-31-9	2,3,7,8-Tetrachlorodibenzofuran	PCF2378	0.1
TEF_WHOlist	9	57117-41-6	1,2,3,7,8-Pentachlorodibenzofuran	PCF12378	0.05
TEF_WHOlist	10	57117-31-4	2,3,4,7,8-Pentachlorodibenzofuran	PCF23478	0.5
TEF_WHOlist	11	70648-26-9	1,2,3,4,7,8-Hexachlorodibenzofuran	PCF123478	0.1
TEF_WHOlist	12	57117-44-9	1,2,3,6,7,8-Hexachlorodibenzofuran	PCF123678	0.1
TEF_WHOlist	13	72918-21-9	1,2,3,7,8,9-Hexachlorodibenzofuran	PCF123789	0.1
TEF_WHOlist	14	60851-34-5	2,3,4,6,7,8-Hexachlorodibenzofuran	PCF234678	0.1
TEF_WHOlist	15	67562-39-4	1,2,3,4,6,7,8-Heptachlorodibenzofuran	PCF1234678	0.01
TEF_WHOlist	16	55673-89-7	1,2,3,4,7,8,9-Heptachlorodibenzofuran	PCF1234789	0.01
TEF_WHOlist	17	39001-02-0	Octachlorodibenzofuran	OCDF	0.0001
TEF_WHOlist	18	32598-13-3	3,3',4,4'-Tetrachlorobiphenyl	PCB077	0.0001
TEF_WHOlist	19	70362-50-4	3,4,4',5-Tetrachlorobiphenyl	PCB081	0.0001
TEF_WHOlist	20	32598-14-4	2,3,3',4,4'-Pentachlorobiphenyl	PCB105	0.0001
TEF_WHOlist	21	74472-37-0	2,3,4,4',5-Pentachlorobiphenyl	PCB114	0.0005
TEF_WHOlist	22	31508-00-6	2,3',4,4',5-Pentachlorobiphenyl	PCB118	0.0001
TEF_WHOlist	23	65510-44-3	2,3',4,4',5'-Pentachlorobiphenyl	PCB123	0.0001
TEF_WHOlist	24	57465-28-8	3,3',4,4',5-Pentachlorobiphenyl	PCB126	0.1
TEF_WHOlist	25	38380-08-4	2,3,3',4,4',5-Hexachlorobiphenyl	PCB156	0.0005
TEF_WHOlist	26	69782-90-7	2,3,3',4,4',5'-Hexachlorobiphenyl	PCB157	0.0005
TEF_WHOlist	27	52663-72-6	2,3',4,4',5,5'-Hexachlorobiphenyl	PCB167	0.00001
TEF_WHOlist	28	32774-16-6	3,3',4,4',5,5'-Hexachlorobiphenyl	PCB169	0.01
TEF_WHOlist	29	39635-31-9	2,3,3',4,4',5,5'-Heptachlorobiphenyl	PCB189	0.0001

Table 2-1. Deviations from Round 1 FSP.

River Mile	Round 1 ID	FSP ID (6/14/02)	Fish Tissue	Crayfish Tissue	Clam Tissue	Benthic Invertebrates	Collocated Sediment	Beach Sediment	New Station	Deviations from FSP
RM 2	02R001	02B001	✔	✔		✔	✔			Moved station location 300 feet downstream. Some homogenized sculpin tissue collected on July 22, 2002 was lost during shipment. A small aliquot of the same sample was shipped separately and analyzed for Hg only.
	02R015	none	✔	✔			✔		✔	Station was requested by EPA.
	02R113	none	✔						✔	Subyearling chinook salmon beach seining area.
RM 3	03B030	03B030						✔		Station was moved 257ft upstream to sample larger beach area; two additional beach samples were added to composite after consultation with Mike Poulsen (ODEQ).
	03B031	03B031						✔		Moved station location 1,108 feet upstream.
	03B033	none						✔	✔	HHRA beach sediment composite.
	03R001	03B001	✔				✔			Moved station location 520 feet downstream.
	03R008	03B008		✔						Station relabeled as 03R001 because crayfish were collected at same sculpin site.
	03R002	03B002	✔				✔			Moved station location 938 feet upstream.
	03R009	03B009		✔						Moved station location 426 feet upstream; relabeled station as 03R002 because crayfish were collected at same sculpin site.
	03R003	03B003		✔			✔			Moved station location 213 feet upstream.
	03R004	03B004	✔	✔	✔		✔			Moved station location 937 feet upstream into RM4. Not enough clam tissue for analyses.
	03R032	none	✔	✔			✔		✔	Station was requested by EPA.
	03R034	none	✔				✔		✔	Alternate sculpin station for 03R003. A field-split sample at this location was requested by and provided to Schnitzer.
	03R040	03B002				✔	✔		✔	Offshore benthic taxonomy collocated with sediment, sediment collected with powergrab.
	03R041	03B001				✔	✔		✔	Offshore benthic taxonomy collocated with sediment.
	03R118	none	✔						✔	Subyearling chinook salmon beach seining area.
	03R125	none	✔						✔	Subyearling chinook salmon beach seining area.
RM 4	04B024	04B024						✔		Moved station location 1,065 feet upstream.
	04R004	04B004	✔			✔	✔			Moved station location 554 feet downstream.
	04R023	none	✔						✔	Smallmouth bass river mile area for ERA/HHRA.
	04R126	none	✔						✔	Subyearling chinook salmon beach seining area.
RM 5	05B018	05B018						✔		Two additional beach samples were added to composite after consultation with Mike Poulsen (ODEQ).
	05B019	05B019						✔		Moved station location 852 feet upstream.
	05R002	05B002								Moved sculpin and benthic taxonomy station location 809 feet downstream to 05R003.
	05R003	05B003		✔		✔	✔			Unable to collect sculpin. Alternate station 05R020 was chosen.
	05R020	none	✔				✔		✔	Alternate sculpin station for 05R003.
	05R040	none				✔	✔		✔	Sorting of benthic infauna in the sample was prevented due to liquefaction of crystalline petroleum deposits contained in the sample sediments that reacted with preservatives in the sampling bag.
	05R041	none				✔	✔		✔	Offshore benthic taxonomy collocated with sediment.
RM 6	06B025	06B025						✔		Moved station location 639 feet downstream.
	06B029	06B024						✔		Several individual samples of composite could only be taken to 8 cm of depth due to rocks under the sandy beach.
	06B030	none						✔	✔	HHRA beach sediment composite.
	06R002	06B002	✔		✔	✔	✔			Crayfish was not collected at this station. Alternate station 06R031 was chosen, powergrab used for sediment.
	06R004	06B004	✔	✔			✔			Unsuccessfully sampled with vanVeen due to rocks/sticks, later sampled with powergrab.
	06R024	none	✔						✔	Smallmouth bass river mile area for ERA/HHRA.
	06R031	none		✔			✔		✔	Alternate crayfish station for 06R002.
	06R040	none				✔	✔		✔	Offshore benthic taxonomy collocated with sediment.
RM 7	07B023	07B023						✔		Station moved slightly in the field to a larger and more accessible beach, no change in the station number.
	07B024	none						✔	✔	HHRA beach sediment composite.
	07R001	07B001								Unable to collect sculpin and crayfish from this location. Station 07R006 was chosen as alternate.
	07R002	07B002								Station was abandoned by EPA before field sampling event started.
	07R003	07B003	✔	✔	✔	✔	✔			Moved station location 298 feet downstream.

Table 2-1. Deviations from Round 1 FSP.

River Mile	Round 1 ID	FSP ID (6/14/02)	Fish Tissue	Crayfish Tissue	Clam Tissue	Benthic Invertebrates	Collocated Sediment	Beach Sediment	New Station	Deviations from FSP
	07R006	none	✔	✔	✔		✔		✔	Alternate crayfish and sculpin station for 07R001.
	07R030	none			✔		✔		✔	ERA clam and collocated sediment station, station was added in the field because clams were collected at too great a distance from 07R003 to be included with the clams from 07R003.
	07R040	none				✔	✔		✔	Offshore benthic taxonomy collocated with sediment.
RM 8	08R002	08B002	✔	✔			✔			Moved station location 511 feet downstream.
	08R003	08B003	✔	✔		✔	✔			Unsuccessfully sampled with vanVeen grab due to rocks/sticks, later sampled with powergrab.
	08R032	none	✔						✔	Smallmouth bass river mile area for ERA/HHRA.
	08R040	none				✔	✔		✔	Offshore benthic taxonomy collocated with sediment.
	08R041	none				✔	✔		✔	Offshore benthic taxonomy collocated with sediment.
RM 9	09B026	09B026						✔		Full penetration of hand corer to 15 cm could not be attained at some sampling locations due to rocks at depth.
	09B027	none						✔	✔	HHRA beach sediment composite, some station locations were modified slightly because of inaccessibility due to soft mud at originally defined sampling points.
	09B028	none						✔	✔	HHRA beach sediment composite.
	09R001	09B001	✔	✔		✔	✔			Moved station location 383 feet SW.
	09R002	09B002	✔			✔	✔			Moved station location 341 feet SE.
	09R003	09B003		✔						Moved station location 213 feet east and relabeled as 09R002.
	09R040	none				✔	✔		✔	Offshore benthic taxonomy collocated with sediment.
	09R041	none				✔	✔		✔	Offshore benthic taxonomy collocated with sediment, station as originally targeted was too rocky/cobbly and was subsequently shifted slightly downstream.
	26R111	none	✔						✔	Collection of subyearling chinook salmon station above the falls.

Notes:
RM = River Mile
ERA = ecological risk assessment
HHRA = human health risk assessment
FSP = Round 1 Field Sampling Plan
Fish Tissue = sculpin, largescale sucker, smallmouth bass, carp, bullhead, northern pikeminnow, peamouth, black crappie, subyearling chinook salmon, lamprey ammocoetes, or walleye.

Table 2-2. Sampling Completeness of Round 1 Fish and Crayfish Tissue Composites.

Species	Composites Proposed	Composites Collected	Composition of each composite	Field QC Proposed	Field QC Collected[2]
Black crappie					
whole-body	6	4	5 fish	6	4
fillet	6	4	5 fish	6	4
Brown bullhead					
whole-body	6	6	5 fish	6	6
fillet	6	6	5 fish	6	6
Carp					
whole-body	6	6	5 fish	6	6
fillet	6	6	5 fish	6	6
Smallmouth bass					
whole-body	14	14	5 fish[1]	9	9
fillet	5	5	5 fish	0	0
Crayfish	21	27	> 150 grams	2	3
Subyearling chinook	7	7	> 150 grams	1	0
Largescale sucker	5	6	5 fish	1	1
Northern pikeminnow	5	6	5 fish	NA	1
Peamouth	5	4	5 fish	NA	0
Sculpin	21	27	> 150 grams	2	3

Notes:

[1] = Some smallmouth bass composites contained less than 5 targeted fish.

[2] = Replicate composite samples for HHRA were also considered field QC samples.

NA = not applicable. Northern pikeminnow and peamouth were initially considered as alternate species.

QC = quality control

Table 3-1. Round 1 Summary of Sample Types and Analyses per Sampling Station.

Station	Species [a, b, c]	Whole Body, Fillet or depth [d]	Matrix	Sample Type	Field Splits	Field Replicates	Conventionals [1,2]	Metals [3,4]	PCB-Ar [5]	Pesticides [6]	SVOC [7]	Herbicides [8]	VOC	Butyltins	PCB-cong [9]	Dioxin/Furans	Benthic Taxonomy	Homogenization	Composite Sample ID
02R001	S	015	BN	BENTHIC													✓		LWG0102R001BNS015S00
02R001	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓			✓	✓			LWG0102R001SDS015C00
02R001	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0102R001TSCRWBC00
02R001	SP	WB	TS	ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0102R001TSSPWBC00
02R015	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0102R015SDS015C00
02R015	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0102R015TSCRWBC00
02R015	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0102R015TSSPWBC00
02R102	SC	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG1A02R102TSSCWBC00
02R112	SC	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG1A02R112TSSCWBC00
02R113	SC	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG1A02R113TSSCWBC00
03B030	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0103B030SDS015C00
03B031	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0103B031SDS015C00
03B033	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0103B033SDS015C00
03R001	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0103R001SDS015C00
03R001	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0103R001TSSPWBC00
03R001 (03R008) [⌘]	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0103R001TSCRWBC00
03R002	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0103R002SDS015C00
03R002	SP	WB	TS	ERA		✓	✓	✓	✓	✓	✓							✓	LWG0103R002TSSPWBC10
03R002	SP	WB	TS	ERA		✓	✓	✓	✓	✓	✓							✓	LWG0103R002TSSPWBC20
03R002 (03R009) [⌘]	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0103R002TSCRWBC00
03R003	S	015	SD	COLLOC		✓	✓	✓	✓	✓	✓	✓			✓	✓			LWG0103R003SDS015C10
03R003	S	015	SD	COLLOC		✓	✓	✓	✓	✓	✓	✓							LWG0103R003SDS015C20
03R003	S	015	SD	COLLOC	✓		✓	✓	✓	✓	✓	✓							LWG0103R003SDS015C31
03R003	S	015	SD	COLLOC	✓		✓	✓	✓	✓	✓	✓							LWG0103R003SDS015C32
03R003	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0103R003TSCRWBC00
03R004	S	015	SD	COLLOC	✓		✓	✓	✓	✓	✓	✓		✓	✓	✓			LWG0103R004SDS015C11
03R004	S	015	SD	COLLOC	✓		✓	✓	✓	✓	✓	✓		✓					LWG0103R004SDS015C12

Table 3-1. Round 1 Summary of Sample Types and Analyses per Sampling Station.

Station	Species[a, b, c]	Whole Body, Fillet or depth[d]	Matrix	Sample Type	Field Splits	Field Replicates	Conventionals[1,2]	Metals[3,4]	PCB-Ar[5]	Pesticides[6]	SVOC[7]	Herbicides[8]	VOC	Butyltins	PCB-cong[9]	Dioxin/Furans	Benthic Taxonomy	Homogenization	Composite Sample ID
03R004	S	015	SD	COLLOC		✓	✓	✓	✓	✓	✓	✓		✓					LWG0103R004SDS015C20
03R004	S	015	SD	COLLOC		✓	✓	✓	✓	✓	✓	✓		✓					LWG0103R004SDS015C30
03R004	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0103R004TSCRWBC00
03R004	SP	WB	TS	ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0103R004TSSPWBC10
03R004	SP	WB	TS	ERA		✓	✓	✓	✓	✓	✓							✓	LWG0103R004TSSPWBC20
03R005	S	015	BN	BENTHIC		✓											✓		LWG0103R005BNS015S10
03R005	S	015	BN	BENTHIC		✓											✓		LWG0103R005BNS015S20
03R005	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓		✓	✓	✓			LWG0103R005SDS015C00
03R005	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0103R005TSCRWBC00
03R005	SP	WB	TS	ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0103R005TSSPWBC00
03R014	LS	WB	TS	ERA		✓	✓	✓	✓	✓	✓							✓	LWG0103R014TSLSWBC10
03R014	LS	WB	TS	ERA		✓	✓	✓	✓	✓	✓							✓	LWG0103R014TSLSWBC20
03R014	NP	WB	TS	ERA		✓	✓	✓	✓	✓								✓	LWG0103R014TSNPWBC10
03R014	NP	WB	TS	ERA		✓	✓	✓	✓	✓								✓	LWG0103R014TSNPWBC20
03R014	PM	WB	TS	ERA			✓	✓	✓	✓								✓	LWG0103R014TSPMWBC00
03R014	SB	FL	TS	HHRA/ERA			✓	✓	✓	✓								✓	LWG0103R014TSSBFLC00
03R014	SB	FS	TS	HHRA/ERA				✓										✓	LWG0103R014TSSBFSC00
03R014	SB	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0103R014TSSBWBC00
03R032	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0103R032SDS015C00
03R032	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0103R032TSCRWBC00
03R032	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0103R032TSSPWBC00
03R034	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0103R034SDS015C00
03R034	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0103R034TSSPWBC00
03R040	S	015	BN	BENTHIC													✓		LWG0103R040BNS015S00
03R040	S	015	SD	SEDIMENT			✓	✓	✓	✓	✓	✓							LWG0103R040SDS015C00
03R041	S	015	BN	BENTHIC													✓		LWG0103R041BNS015S00
03R041	S	015	SD	SEDIMENT			✓	✓	✓	✓	✓	✓							LWG0103R041SDS015C00

Table 3-1. Round 1 Summary of Sample Types and Analyses per Sampling Station.

Station	Species [a, b, c]	Whole Body, Fillet or depth [d]	Matrix	Sample Type	Field Splits	Field Replicates	Conventionals [1,2]	Metals [3,4]	PCB-Ar [5]	Pesticides [6]	SVOC [7]	Herbicides [8]	VOC	Butyltins	PCB-cong [9]	Dioxin/Furans	Benthic Taxonomy	Homogenization	Composite Sample ID
03R118	SC	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG1A03R118TSSCWBC00
03R125	SC	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0103R125TSSCWBC00
04B023	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0104B023SDS015C00
04B024	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0104B024SDS015C00
04R002	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0104R002SDS015C00
04R002	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0104R002TSCRWBC00
04R002	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0104R002TSSPWBC00
04R003	S	015	BN	BENTHIC													✓		LWG0104R003BNS015S00
04R003	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0104R003SDS015C00
04R003	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0104R003TSCRWBC00
04R003	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0104R003TSSPWBC00
04R004	S	015	BN	BENTHIC		✓											✓		LWG0104R004BNS015S10
04R004	S	015	BN	BENTHIC		✓											✓		LWG0104R004BNS015S20
04R004	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0104R004SDS015C00
04R004	CR	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓							✓	LWG0104R004TSCRWBC10
04R004	CR	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓							✓	LWG0104R004TSCRWBC20
04R004	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0104R004TSSPWBC00
04R023	SB	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0104R023TSSBWBC10
04R023	SB	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0104R023TSSBWBC20
04R023	SB	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0104R023TSSBWBC30
04R126	SC	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0104R126TSSCWBC00
05B018	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0105B018SDS015C00
05B019	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0105B019SDS015C00
05R001	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0105R001SDS015C00
05R001	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0105R001TSCRWBC00
05R001	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0105R001TSSPWBC00
05R003	S	015	BN	BENTHIC													✓		LWG0105R003BNS015S00

Table 3-1. Round 1 Summary of Sample Types and Analyses per Sampling Station.

Station	Species [a, b, c]	Whole Body, Fillet or depth [d]	Matrix	Sample Type	Field Splits	Field Replicates	Conventionals [1,2]	Metals [3,4]	PCB-Ar [5]	Pesticides [6]	SVOC [7]	Herbicides [8]	VOC	Butyltins	PCB-cong [9]	Dioxin/Furans	Benthic Taxonomy	Homogenization	Composite Sample ID
05R003	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0105R003SDS015C00
05R003	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0105R003TSCRWBC00
05R006	LS	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0105R006TSLSWBC00
05R006	SB	FL	TS	HHRA/ERA			✓	✓	✓	✓								✓	LWG0105R006TSSBFLC00
05R006	SB	FS	TS	HHRA/ERA				✓										✓	LWG0105R006TSSBFSC00
05R006	SB	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0105R006TSSBWBC00
05R006	NP	WB	TS	ERA			✓	✓	✓	✓								✓	LWG0105R006TSNPWBC00
05R006	PM	WB	TS	ERA			✓	✓	✓	✓								✓	LWG0105R006TSPMWBC00
05R020	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0105R020SDS015C00
05R020	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0105R020TSSPWBC00
05R040	S	015	BN	BENTHIC													✓		LWG0105R040BNS015S00
05R040	S	015	SD	SEDIMENT			✓	✓	✓	✓	✓	✓							LWG0105R040SDS015C00
05R041	S	015	BN	BENTHIC													✓		LWG0105R041BNS015S00
05R041	S	015	SD	SEDIMENT			✓	✓	✓	✓	✓	✓							LWG0105R041SDS015C00
06B022	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0106B022SDS015C00
06B025	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0106B025SDS015C00
06B026	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0106B026SDS015C00
06B029	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0106B029SDS015C00
06B030	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0106B030SDS015C00
06R001	S	015	BN	BENTHIC													✓		LWG0106R001BNS015S00
06R001	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0106R001SDS015C00
06R001	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0106R001TSCRWBC00
06R001	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0106R001TSSPWBC00
06R002	S	015	BN	BENTHIC													✓		LWG0106R002BNS015S00
06R002	S	015	SD	COLLOC		✓	✓	✓	✓	✓	✓	✓			✓	✓			LWG0106R002SDS015C10
06R002	S	015	SD	COLLOC		✓	✓	✓	✓	✓	✓	✓							LWG0106R002SDS015C20
06R002	S	015	SD	COLLOC	✓		✓	✓	✓	✓	✓	✓							LWG0106R002SDS015C31

Table 3-1. Round 1 Summary of Sample Types and Analyses per Sampling Station.

Station	Species [a, b, c]	Whole Body, Fillet or depth [d]	Matrix	Sample Type	Field Splits	Field Replicates	Conventionals [1,2]	Metals [3,4]	PCB-Ar [5]	Pesticides [6]	SVOC [7]	Herbicides [8]	VOC	Butyltins	PCB-cong [9]	Dioxin/Furans	Benthic Taxonomy	Homogenization	Composite Sample ID
06R002	S	015	SD	COLLOC	✓		✓	✓	✓	✓	✓	✓							LWG0106R002SDS015C32
06R002	CA	WB	TS	ERA			✓	✓	✓	✓	✓			✓				✓	LWG0106R002TSCAWBC00
06R002	SP	WB	TS	ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0106R002TSSPWBC10
06R002	SP	WB	TS	ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0106R002TSSPWBC20
06R004	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓			✓	✓			LWG0106R004SDS015C00
06R004	CR	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0106R004TSCRWBC10
06R004	CR	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0106R004TSCRWBC20
06R004	SP	WB	TS	ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0106R004TSSPWBC00
06R024	SB	FL	TS	HHRA/ERA			✓	✓	✓	✓								✓	LWG0106R024TSSBFLC00
06R024	SB	FS	TS	HHRA/ERA				✓										✓	LWG0106R024TSSBFSC00
06R024	SB	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0106R024TSSBWBC00
06R031	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓		✓					LWG0106R031SDS015C00
06R031 (06R002)⌘	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0106R031TSCRWBC00
06R040	S	015	BN	BENTHIC													✓		LWG0106R040BNS015S00
06R040	S	015	SD	SEDIMENT			✓	✓	✓	✓	✓	✓							LWG0106R040SDS015C00
07B022	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0107B022SDS015C00
07B023	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0107B023SDS015C00
07B024	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0107B024SDS015C00
07R003	S	015	BN	BENTHIC													✓		LWG0107R003BNS015S00
07R003	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0107R003SDS015C00
07R003	CA	WB	TS	ERA			✓	✓	✓	✓	✓			✓				✓	LWG0107R003TSCAWBC00
07R003	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0107R003TSCRWBC00
07R003	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0107R003TSSPWBC00
07R004	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0107R004SDS015C00
07R004	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0107R004TSCRWBC00
07R006	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓			✓	✓			LWG0107R006SDS015C00
07R006	CA	WB	TS	ERA			✓	✓	✓	✓	✓			✓				✓	LWG0107R006TSCAWBC00

Table 3-1. Round 1 Summary of Sample Types and Analyses per Sampling Station.

Station	Species [a, b, c]	Whole Body, Fillet or depth [d]	Matrix	Sample Type	Field Splits	Field Replicates	Conventionals [1,2]	Metals [3,4]	PCB-Ar [5]	Pesticides [6]	SVOC [7]	Herbicides [8]	VOC	Butyltins	PCB-cong [9]	Dioxin/Furans	Benthic Taxonomy	Homogenization	Composite Sample ID
07R006	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0107R006TSCRWBC00
07R006	SP	WB	TS	ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0107R006TSSPWBC00
07R009	LS	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0107R009TSLSWBC00
07R009	SB	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0107R009TSSBWBC10
07R009	SB	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0107R009TSSBWBC20
07R009	SB	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0107R009TSSBWBC30
07R009	NP	WB	TS	ERA			✓	✓	✓	✓								✓	LWG0107R009TSNPWBC00
07R030	S	015	SD	SEDIMENT			✓	✓	✓	✓	✓	✓							LWG0107R030SDS015C00
07R040	S	015	BN	BENTHIC													✓		LWG0107R040BNS015S00
07R040	S	015	SD	SEDIMENT			✓	✓	✓	✓	✓	✓							LWG0107R040SDS015C00
08B032	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0108B032SDS015C00
08R001	S	015	BN	BENTHIC													✓		LWG0108R001BNS015S00
08R001	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0108R001SDS015C00
08R001	S	015	SD	COLLOC									✓						LWG0108R001SDS015C00
08R001	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0108R001TSCRWBC00
08R001	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0108R001TSSPWBC00
08R002	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓							LWG0108R002SDS015C00
08R002	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓							✓	LWG0108R002TSCRWBC00
08R002	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0108R002TSSPWBC00
08R003	S	015	BN	BENTHIC													✓		LWG0108R003BNS015S00
08R003	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓			✓	✓			LWG0108R003SDS015C00
08R003	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0108R003TSCRWBC00
08R003	SP	WB	TS	ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0108R003TSSPWBC00
08R010	LS	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0108R010TSLSWBC00
08R010	SB	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0108R010TSSBWBC10
08R010	SB	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0108R010TSSBWBC20
08R010	SB	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG0108R010TSSBWBC30

Table 3-1. Round 1 Summary of Sample Types and Analyses per Sampling Station.

Station	Species [a, b, c]	Whole Body, Fillet or depth [d]	Matrix	Sample Type	Field Splits	Field Replicates	Conventionals [1,2]	Metals [3,4]	PCB-Ar [5]	Pesticides [6]	SVOC [7]	Herbicides [8]	VOC	Butyltins	PCB-cong [9]	Dioxin/Furans	Benthic Taxonomy	Homogenization	Composite Sample ID
08R010	NP	WB	TS	ERA			✓	✓	✓	✓								✓	LWG0108R010TSNPWBC00
08R010	PM	WB	TS	ERA			✓	✓	✓	✓								✓	LWG0108R010TSPMWBC00
08R032	SB	FL	TS	HHRA/ERA			✓	✓	✓	✓								✓	LWG0108R032TSSBFLC00
08R032	SB	FS	TS	HHRA/ERA				✓										✓	LWG0108R032TSSBFSC00
08R032	SB	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0108R032TSSBWBC00
08R040	S	015	BN	BENTHIC													✓		LWG0108R040BNS015S00
08R040	S	015	SD	SEDIMENT			✓	✓	✓	✓	✓	✓							LWG0108R040SDS015C00
08R041	S	015	BN	BENTHIC													✓		LWG0108R041BNS015S00
08R041	S	015	SD	SEDIMENT			✓	✓	✓	✓	✓	✓							LWG0108R041SDS015C00
09B024	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0109B024SDS015C00
09B026	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0109B026SDS015C00
09B027	S	015	SD	BEACH		✓	✓	✓	✓	✓	✓	✓							LWG0109B027SDS015C10
09B027	S	015	SD	BEACH		✓	✓	✓	✓	✓	✓	✓							LWG0109B027SDS015C20
09B027	S	015	SD	BEACH	✓	✓	✓	✓	✓	✓	✓	✓							LWG0109B027SDS015C31
09B027	S	015	SD	BEACH	✓	✓	✓	✓	✓	✓	✓	✓							LWG0109B027SDS015C32
09B028	S	015	SD	BEACH			✓	✓	✓	✓	✓	✓							LWG0109B028SDS015C00
09R001	S	015	BN	BENTHIC													✓		LWG0109R001BNS015S00
09R001	S	015	SD	COLLOC		✓	✓	✓	✓	✓	✓	✓							LWG0109R001SDS015C10
09R001	S	015	SD	COLLOC		✓	✓	✓	✓	✓	✓	✓							LWG0109R001SDS015C20
09R001	S	015	SD	COLLOC	✓		✓	✓	✓	✓	✓	✓							LWG0109R001SDS015C31
09R001	S	015	SD	COLLOC	✓		✓	✓	✓	✓	✓	✓							LWG0109R001SDS015C32
09R001	CR	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓							✓	LWG0109R001TSCRWBC10
09R001	CR	WB	TS	HHRA/ERA		✓	✓	✓	✓	✓	✓							✓	LWG0109R001TSCRWBC20
09R001	SP	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0109R001TSSPWBC00
09R002	S	015	BN	BENTHIC													✓		LWG0109R002BNS015S00
09R002	SP	WB	TS	ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0109R002RSSPWBC00
09R002	S	015	SD	COLLOC			✓	✓	✓	✓	✓	✓			✓	✓			LWG0109R002SDS015C00

Table 3-1. Round 1 Summary of Sample Types and Analyses per Sampling Station.

Station	Species [a, b, c]	Whole Body, Fillet or depth [d]	Matrix	Sample Type	Field Splits	Field Replicates	Conventionals [1,2]	Metals [3,4]	PCB-Ar [5]	Pesticides [6]	SVOC [7]	Herbicides [8]	VOC	Butyltins	PCB-cong [9]	Dioxin/Furans	Benthic Taxonomy	Homogenization	Composite Sample ID
09R002 (09R003)[⌘]	CR	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0109R002TSCRWBC00
09R006	LS	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0109R006TSLSWBC00
09R006	SB	FL	TS	HHRA/ERA			✓	✓	✓	✓								✓	LWG0109R006TSSBFLC00
09R006	SB	FS	TS	HHRA/ERA				✓										✓	LWG0109R006TSSBFSC00
09R006	SB	WB	TS	HHRA/ERA			✓	✓	✓	✓	✓				✓	✓		✓	LWG0109R006TSSBWBC00
09R006	NP	WB	TS	ERA			✓	✓	✓	✓								✓	LWG0109R006TSNPWBC00
09R006	PM	WB	TS	ERA			✓	✓	✓	✓								✓	LWG0109R006TSPMWBC00
09R040	S	015	BN	BENTHIC													✓		LWG0109R040BNS015S00
09R040	S	015	SD	SEDIMENT			✓	✓	✓	✓	✓	✓							LWG0109R040SDS015C00
09R041	S	015	BN	BENTHIC													✓		LWG0109R041BNS015S00
09R041	S	015	SD	SEDIMENT			✓	✓	✓	✓	✓	✓							LWG0109R041SDS015C00
26R111	SC	WB	TS	ERA			✓	✓	✓	✓	✓							✓	LWG0126R111TSSCWBC00
FZ0306	BC	FL	TS	HHRA			✓	✓	✓	✓								✓	LWB01FZ0306TSBCFLC10
FZ0306	BC	FL	TS	HHRA			✓	✓	✓	✓								✓	LWB01FZ0306TSBCFLC20
FZ0306	BC	FS	TS	HHRA				✓										✓	LWB01FZ0306TSBCFSC10
FZ0306	BC	FS	TS	HHRA				✓										✓	LWB01FZ0306TSBCFSC20
FZ0306	BB	FL	TS	HHRA		✓	✓	✓	✓	✓	✓							✓	LWG01FZ0306TSBBFLC10
FZ0306	BB	FL	TS	HHRA		✓	✓	✓	✓	✓	✓							✓	LWG01FZ0306TSBBFLC20
FZ0306	BB	FL	TS	HHRA		✓	✓	✓	✓	✓	✓							✓	LWG01FZ0306TSBBFLC30
FZ0306	BB	FS	TS	HHRA		✓		✓										✓	LWG01FZ0306TSBBFSC10
FZ0306	BB	FS	TS	HHRA		✓		✓										✓	LWG01FZ0306TSBBFSC20
FZ0306	BB	FS	TS	HHRA		✓		✓										✓	LWG01FZ0306TSBBFSC30
FZ0306	BB	WB	TS	HHRA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG01FZ0306TSBBWBC10
FZ0306	BB	WB	TS	HHRA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG01FZ0306TSBBWBC20
FZ0306	BB	WB	TS	HHRA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG01FZ0306TSBBWBC30
FZ0306	BC	WB	TS	HHRA		✓	✓	✓	✓	✓					✓	✓		✓	LWG01FZ0306TSBCWBC10
FZ0306	BC	WB	TS	HHRA		✓	✓	✓	✓	✓					✓	✓		✓	LWG01FZ0306TSBCWBC20
FZ0306	CP	FL	TS	HHRA		✓	✓	✓	✓	✓								✓	LWG01FZ0306TSCPFLC10

Table 3-1. Round 1 Summary of Sample Types and Analyses per Sampling Station.

Station	Species [a, b, c]	Whole Body, Fillet or depth [d]	Matrix	Sample Type	Field Splits	Field Replicates	Conventionals [1,2]	Metals [3,4]	PCB-Ar [5]	Pesticides [6]	SVOC [7]	Herbicides [8]	VOC	Butyltins	PCB-cong [9]	Dioxin/Furans	Benthic Taxonomy	Homogenization	Composite Sample ID
FZ0306	CP	FL	TS	HHRA		✓	✓	✓	✓	✓								✓	LWG01FZ0306TSCPFLC20
FZ0306	CP	FL	TS	HHRA		✓	✓	✓	✓	✓								✓	LWG01FZ0306TSCPFLC30
FZ0306	CP	FS	TS	HHRA		✓		✓										✓	LWG01FZ0306TSCPFSC10
FZ0306	CP	FS	TS	HHRA		✓		✓										✓	LWG01FZ0306TSCPFSC20
FZ0306	CP	FS	TS	HHRA		✓		✓										✓	LWG01FZ0306TSCPFSC30
FZ0306	CP	WB	TS	HHRA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG01FZ0306TSCPWBC10
FZ0306	CP	WB	TS	HHRA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG01FZ0306TSCPWBC20
FZ0306	CP	WB	TS	HHRA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG01FZ0306TSCPWBC30
FZ0609	BB	FL	TS	HHRA		✓	✓	✓	✓	✓	✓							✓	LWG01FZ0609TSBBFLC10
FZ0609	BB	FL	TS	HHRA		✓	✓	✓	✓	✓	✓							✓	LWG01FZ0609TSBBFLC20
FZ0609	BB	FL	TS	HHRA		✓	✓	✓	✓	✓	✓							✓	LWG01FZ0609TSBBFLC30
FZ0609	BB	FS	TS	HHRA		✓		✓										✓	LWG01FZ0609TSBBFSC10
FZ0609	BB	FS	TS	HHRA		✓		✓										✓	LWG01FZ0609TSBBFSC20
FZ0609	BB	FS	TS	HHRA		✓		✓										✓	LWG01FZ0609TSBBFSC30
FZ0609	BB	WB	TS	HHRA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG01FZ0609TSBBWBC10
FZ0609	BB	WB	TS	HHRA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG01FZ0609TSBBWBC20
FZ0609	BB	WB	TS	HHRA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG01FZ0609TSBBWBC30
FZ0609	BC	FL	TS	HHRA		✓	✓	✓	✓	✓								✓	LWG01FZ0609TSBCFLC10
FZ0609	BC	FL	TS	HHRA		✓	✓	✓	✓	✓								✓	LWG01FZ0609TSBCFLC20
FZ0609	BC	FS	TS	HHRA		✓		✓										✓	LWG01FZ0609TSBCFSC10
FZ0609	BC	FS	TS	HHRA		✓		✓										✓	LWG01FZ0609TSBCFSC20
FZ0609	BC	WB	TS	HHRA		✓	✓	✓	✓	✓					✓	✓		✓	LWG01FZ0609TSBCWBC10
FZ0609	BC	WB	TS	HHRA		✓	✓	✓	✓	✓					✓	✓		✓	LWG01FZ0609TSBCWBC20
FZ0609	CP	FL	TS	HHRA		✓	✓	✓	✓	✓								✓	LWG01FZ0609TSCPFLC10
FZ0609	CP	FL	TS	HHRA		✓	✓	✓	✓	✓								✓	LWG01FZ0609TSCPFLC20
FZ0609	CP	FL	TS	HHRA		✓	✓	✓	✓	✓								✓	LWG01FZ0609TSCPFLC30
FZ0609	CP	FS	TS	HHRA		✓		✓										✓	LWG01FZ0609TSCPFSC10

Table 3-1. Round 1 Summary of Sample Types and Analyses per Sampling Station.

Station	Species [a, b, c]	Whole Body, Fillet or depth [d]	Matrix	Sample Type	Field Splits	Field Replicates	Conventionals [1,2]	Metals [3,4]	PCB-Ar [5]	Pesticides [6]	SVOC [7]	Herbicides [8]	VOC	Butyltins	PCB-cong [9]	Dioxin/Furans	Benthic Taxonomy	Homogenization	Composite Sample ID
FZ0609	CP	FS	TS	HHRA		✓		✓										✓	LWG01FZ0609TSCPFSC20
FZ0609	CP	FS	TS	HHRA		✓		✓										✓	LWG01FZ0609TSCPFSC30
FZ0609	CP	WB	TS	HHRA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG01FZ0609TSCPWBC10
FZ0609	CP	WB	TS	HHRA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG01FZ0609TSCPWBC20
FZ0609	CP	WB	TS	HHRA		✓	✓	✓	✓	✓	✓				✓	✓		✓	LWG01FZ0609TSCPWBC30

Table 3-1. Round 1 Summary of Sample Types and Analyses per Sampling Station.

Notes:

BB = Brown Bullhead
BBF = Brown Bullhead Fillet
BBWB = Brown Bullhead Whole Body
BC = Black Crappie
BCF = Black Crappie Fillet
BCWB = Black Crappie Whole Body
BN = Benthic Taxonomy
BSD = Beach Sediment
COLLOC = Collocated Sediment
CP = Carp
CPF = Carp Fillet
CPWB = Carp Whole Body
CR = Crayfish
CSD = Collocated Sediment
ERA = Ecological Risk Assessment
HHRA = Human Health Risk Assessment
LS = Largescale Sucker
NP = Northern Pikeminnow
PCB-Ar = Polychlorinated Biphenyl - Aroclors
PCB-cong = Polychlorinated Biphenyl - Congeners
PM = Peamouth
S = Sediment
SB = Smallmouth Bass
SBF = Smallmouth Bass Fillet
SBWB = Smallmouth Bass Whole Body
SC = Subyearling Chinook Salmon
SP = Sculpin
TBT = Tributyltin
TS = Tissue
VOC = Volatile Organic Compounds

[a] = ERA Species were: CR, LS, NP, SB, SC, SP, and PM.
[b] = HHRA species were: BC, BB, CR, CP and SB .
[c] = FS (skinless fillet) analyzed for Hg only. FL (fillet with skin) analyzed for all metals except Hg.
[d] = For sediment samples, [015] designates surface depth in centimeters.

[1] = Conventionals in sediment were: Total Solids, Grain Size, and Total Organic Carbon.
[2] = Conventionals in tissue were: Total Solids and Lipids.
[3] = Metals analyzed in sediment were: Ag, Al, As, Cd, Cr, Cu, Ni, Pb, Sb, Se, Zn, and Hg.
[4] = Metals analyzed in tissue were: Ag, Al, As, Cd, Cr, Cu, Mn, Ni, Pb, Sb, Se, Tl, Zn, and Hg.
[5] = PCB-Ar analyzed in sediment were: 1016, 1221, 1232, 1242, 1248, 1254, 1260. In Tissue, the same as for sediments plus 1262 and 1268.
[6] = Lipids were extracted from tissue and run with pesticide analysis.
[7] = Sediment and tissue full scan and SIMs.
[8] = Sediment only.
[9] = 209 congeners.
⌘ = Station Id used for crayfish compositing (original station Id in parenthesis).

Table 3-2. Summary of Analytical Methods for Sediment Samples.

Analytes	Laboratory	Analytical Method	
		Protocol	Procedure
Conventionals			
Total solids	ARI	EPA-160.3/SM 2540B	Gravimetric - total residue by drying oven
Total organic carbon	ARI	Plumb 1981	Combustion; coulometric titration
Grain size	REGL	PSEP 1986	Sieves and pipette method
Metals			
Aluminum, chromium, copper, manganese, nickel, zinc	ARI	SW846-6010B	ICP/AES
Antimony	ARI	SW846-7041	GFAA
Arsenic	ARI	SW846-7060A	GFAA
Cadmium	ARI	SW846-7131A	GFAA
Lead	ARI	SW846-7421	GFAA
Mercury	ARI	SW846-7471A	CVAA
Selenium	ARI	SW846-7740	GFAA
Silver	ARI	SW846-7761	GFAA
Organochlorine pesticides and selected SVOCs	ARI	SW846-8081A	GC/ECD
PCB Aroclors	ARI	SW846-8082	GC/ECD
Chlorinated herbicides and pentachlorophenol	ARI	SW846-8151A	GC/MS
Volatile organic compounds	ARI	SW846-8260B	GC/MS
Volatile organic compounds (VOC-SIM)[a]	ARI	SW846-8260B	GC/MS
Semivolatile organic compounds	ARI	SW846-8270C	GC/MS
Semivolatile organic compounds (SVOC-SIM)[a]	ARI	SW846-8270C	GC/MS (SIM)
Butyltins	ARI	Krone et al. 1988	GC/FPD
Chlorinated dioxins and furans	Axys	EPA-1613B	HRGC/HRMS
PCB congeners	Axys	EPA-1668A	HRGC/HRMS

Notes:

ARI	Analytical Resources Incorporated
Axys	AXYS Analytical Services LTD.
REGL	Rosa Environmental and Geotechnical Laboratory
ICP/AES	Inductively Coupled Plasma - Atomic Emission Spectrometry
GFAA	Graphite Furnace Atomic Absorption
GC/ECD	Gas Chromatography - Electron Capture Detector
GC/MS	Gas Chromatography - Mass Spectrometry
GC/MS (SIM)	Gas Chromatography - Mass Spectrometry (Selective Ion Monitoring)
GC/FPD	Gas Chromatogphy - Flame Photometric Detector
HRGC/HRMS	High Resolution Gas Chromatography - High Resolution Mass Spectrometry

[a] SIM used for low-level analytes.

Table 3-3. Summary of Analytical Methods for Tissue Samples.

Analytes	Laboratory	Analytical Method	
		Protocol	Procedure
Conventionals			
Lipids	CAS	PSEP, 1986	Gravimetric
Total solids	CAS	Laboratory SOP	Lyophilization
Metals			
Aluminum[a], chromium, manganese[a], zinc[a]	CAS	SW846-6010B	ICP/AES
Aluminum[a], antimony, arsenic, cadmium, copper, lead, manganese[a], nickel, silver, thallium, zinc[a]	CAS	SW846-6020[b]	ICP/MS
Mercury	CAS	SW846-7471A	CVAA
Selenium	CAS	SW846-7740	GFAA
Semivolatile organic compounds	ARI	SW846-8270C	GC/MS
Semivolatile organic compounds (SVOC-SIM)[c]	ARI	SW846-8270C	GC/MS
Chlorinated dioxins and furans	Axys	EPA-1613B	HRGC/HRMS
PCB congeners	Axys	EPA-1668A	HRGC/HRMS
Butyltins	CAS	Krone et al., 1988	GC/FPD
Organochlorine pesticides and selected SVOCs	CAS	SW846-8081A	GC/ECD
PCB aroclors	CAS	SW846-8082	GC/ECD

Notes:
[a]Analytical method was chosen according to level of analyte in sample.
[b]SW846-6020 used for low concentration metals.
[c]SIM used for low-level analytes.

CAS	Columbia Analytical Services
ARI	Analytical Resources Incorporated
Axys	AXYS Analytical Services LTD.
ICP/AES	Inductively Coupled Plasma - Atomic Emission Spectrometry
ICP/MS	Inductively Coupled Plasma - Mass Spectrometry
CVAA	Cold Vapor Atomic Absorption Spectrometry
GFAA	Graphite Furnace Atomic Absorption Spectrometry
GC/MS	Gas Chromatography - Mass Spectrometry
HRGC/HRMS	High Resolution Gas Chromatography - High Resolution Mass Spectrometry
GC/FPD	Gas Chromatography - Flame Photometric Detector
GC/ECD	Gas Chromatography - Electron Capture Detector

Table 3-4. Methods of Analysis for Metals.

Analyte	QAPP Method	Method Type	Round 1 Method	Method Type
Sediment				
Aluminum	EPA Method 6010	ICP-OES	EPA Method 6010B	ICP-OES
Antimony	EPA Method 7041	GFAA	EPA Method 7041	GFAA
Arsenic	EPA Method 7060A	GFAA	EPA Method 7060A	GFAA
Cadmium	EPA Method 7131A	GFAA	EPA Method 7131A	GFAA
Chromium	EPA Method 6010	ICP-OES	EPA Method 6010B	ICP-OES
Copper	EPA Method 6010	ICP-OES	EPA Method 6010B	ICP-OES
Lead	EPA Method 7421	GFAA	EPA Method 7421	GFAA
Mercury	EPA Method 7471A	CVAA	EPA Method 7471A	CVAA
Nickel	EPA Method 6010	ICP-OES	EPA Method 6010B	ICP-OES
Selenium	EPA Method 7740 *	GFAA	EPA Method 7740	GFAA
Silver	EPA Method 7761	GFAA	EPA Method 7761	GFAA
Zinc	EPA Method 6010	ICP-OES	EPA Method 6010B	ICP-OES
Tissue				
Aluminum	EPA Method 6020	ICP-MS	EPA Methods 6010B and 6020	ICP-MS
Antimony	EPA Method 6020	ICP-MS	EPA Method 6020	ICP-MS
Arsenic	EPA Method 6020	ICP-MS	EPA Method 6020	ICP-MS
Cadmium	EPA Method 6020	ICP-MS	EPA Method 6020	ICP-MS
Chromium	EPA Method 6010B	ICP-OES	EPA Method 6010B	ICP-OES
Copper	EPA Method 6020	ICP-MS	EPA Method 6020	ICP-MS
Lead	EPA Method 6020	ICP-MS	EPA Method 6020	ICP-MS
Manganese	EPA Method 6020	ICP-MS	EPA Methods 6010B and 6020	ICP-OES/ICP-MS
Mercury	EPA Method 7471A	CVAA	EPA Method 7471A	CVAA
Nickel	EPA Method 6020	ICP-MS	EPA Method 6020	ICP-MS
Selenium	EP Method 7740	GFAA	EP Method 7740	GFAA
Silver	EPA Method 6020	ICP-MS	EPA Method 6020	ICP-MS
Thallium	EPA Method 6020	ICP-MS	EPA Method 6020	ICP-MS
Zinc	EPA Method 6020	ICP-MS	EPA Methods 6010B and 6020	ICP-OES/ICP-MS

Notes:

* Method listed for selenium in QAPP Table A7-4 was inadvertently listed as EPA Method 7040.
This was a typographical error and was corrected to EPA Method 7740 in this table.

ICP-OES - inductively coupled plasma-optical emission spectroscopy

ICP-MS - inductively coupled plasma mass spectroscopy

GFAA - graphite furnace atomic absorption spectroscopy

CVAA - cold-vapor atomic absorption spectroscopy

Table 3-5. Definitions of Data Qualifiers.

Data Qualifier	Definition
U	The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
J	The associated numerical value is an estimated quantity.
R	The data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification. (Overrides all quals and their codes.)
N	Presumptive evidence of presence of material.
NJ	Presumptive evidence of the presence of the material at an estimated quantity.
UJ	The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.
T	The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 1 data.

Table 3-6. Summary of Round 1Qualified Data.

Sample Type	Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
			Detected	Undetected				
Sediment	TOC/TS	73	146	0	146	100	detected	
	Grain size	73	937	12	949	99	detected	
						1	undetected	
	Metals	73	663	213	876	76	detected	
						24	undetected	
						6	UJ	LB, MS, LCS, Furnace QC
						11	J	MS, LCS, Furnace QC
						6	R	MS, LCS, Furnace QC
	Butyltins	6	20	10	30	67	detected	
						33	undetected	
						27	J	Calibration
						13	R	Calibration
	PCB Aroclors	73	70	441	511	14	detected	
						86	undetected	
						2	J	Surrogates, Other
	Organochlorine pesticides	73	98	2051	2149	5	detected	
						95	undetected	
						4	UJ	Calibration
						< 1	J	Calibration, Compound quantitation
						6	R	Calibration, Surrogates, LRE, Chromatographic interference
	Semivolatile organic compounds	73	1669	5128	6797	25	detected	
						75	undetected	
						< 1	U	Calibration, LB
						5	UJ	HT, Calibration, LB, LCS, IS
						5	J	Calibration, LCS, Surrogates, IS, LRE, Confirmation criteria exceeded
						8	R	Calibration, LB, Surrogates, IS, LRE, Confirmation criteria exceeded
	Chlorinated herbicides	73	0	730	730	76	U	
						24	UJ	Calibration, LCS
	PCB congeners	12	1766	153	1919	92	detected	
						8	undetected	
						< 1	UJ	MRL/MDL elevated - chromatographic interference
						20	J	Co-elution
	Volatile organic compounds	1	1	75	76	1	detected	
						99	undetected	
						99	UJ	HT, Calibration, Surrogates
						1	J	HT
	Chlorinated dioxins/furans	12	294	6	300	98	detected	
						2	undetected	
						1	UJ	LB, Other
						2	J	Other
						86	NJ	Original blank lost during extraction.

Table 3-6. Summary of Round 1Qualified Data.

Sample Type	Analyte Group	Number of Samples	Number of Data Points		Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
			Detected	Undetected				
Tissue	Mercury	131	132	0	132	100	detected	
	Lipids/TS	129	312	0	312	100	detected	
	Metals	129	1274	403	1677	76	detected	
						24	undetected	
						10	U	LB
						2	UJ	LB, MS, Instrument QC, LD
						34	J	MS, LCS, Instrument QC, IS, LD
	Butyltins	2	6	2	8	75	detected	
						25	undetected	
	PCB Aroclors	129	190	980	1170	16	detected	
						84	undetected	
						10	UJ	Calibration
						5	J	Calibration, Compound quantitation, Confirmation criteria exceeded
	Organochlorine pesticides	129	901	4235	5136	18	detected	
						82	undetected	
						5	U	Analyte identification issues
						9	UJ	Calibration, LCS, Analyte identification issues
						3	J	Calibration, LCS, Surrogates, LRE, Analyte identification issues
						3	N	Analyte identification issues
						7	NJ	Analyte identification issues
						< 1	R	Analyte identification issues, Replicate precision
	Semivolatile organic compounds	129	172	12098	12270	1	detected	
						99	undetected	
						1	U	Calibration, LB, LCS, Confirmation criteria exceeded
						4	UJ	Calibration, LB, LCS, Surrogates, Confirmation criteria exceeded
						< 1	J	Calibration, LCS, Surrogates, LRE, Confirmation criteria exceeded, LB
						< 1	N	Confirmation criteria exceeded
						1	NJ	Confirmation criteria exceeded
						< 1	R	LCS
	PCB congeners	49	6499	1302	7801	83	detected	
						17	undetected	
						< 1	UJ	IS
						21	J	IS, Compound quantitation, Co-elution
						< 1	NJ	Compound quantitation, Co-elution
	Chlorinated dioxins/furans	49	1146	79	1225	94	detected	
						6	undetected	
						3	U	LB
						3	J	IS, Other

Notes:

Includes replicates and splits
Excludes field blanks

LB	Laboratory blank	TS	Total solids
LCS	Laboratory control sample	TOC	Total organic carbon
LRE	Linear range exceeded	HT	Holding times
IS	Internal standards	MRL	Method reporting limit
MDL	Method detection limit	LD	Laboratory duplicate
MS	Matrix Spike		

Table 4-1. A Record of Sediment Stakes Monitoring Activities and Calculations of Net Bathymetric Change at Each Station in the Lower Willamette River.

Transect Number	Location	Stake	Latitude	Longitude	Elevation (NAVD 88)	Stake Installation (7/17/02)	Stake Replacement (8/5/02)	Stake Monitoring (8/5/02)	Stake Monitoring (9/19/02)	Stake Monitoring (10/17/02)	Stake Monitoring (11/20/02)	Stake Monitoring (12/20/02)	Stake Monitoring (3/12/03)	Stake Monitoring (7/10/03)	Stake Monitoring (11/1/03)	Stake Monitoring (1/19/04)	Stake Monitoring (6/29/04)	Net Change**
						(cm)*	(cm)*	(cm)*	(cm)*	(cm)*	(cm)*	(cm)*	(cm)*	(cm)*	(cm)*	(cm)*	(cm)*	
1	General Electric (PGE)	Low			7.91	30		30	30	33	34	34	33	32	31	missing	missing	1
		Median			10.09	30		30	28	30	28	27	30	39	missing	missing	missing	9
		High			15.87	30		30	30	30	27	26	missing	missing	missing	missing	missing	-4
2	Schnitzer Steel	No suitable location																
3	Terminal 4	Low	N 45 34.142	W122 46.571	8.84	30		31	31	32	32	29	35	30	25	18	16	14
		Median			11.76	30	30	38	36	35	41	45	reset to 45cm	46	39	41	missing	11
		High			15.27	30		30	30	30	30	30	30	missing	missing	missing	missing	0
4	Gasco	Low	N 45 34.830	W122 45.596	8.21	30		19	17	21	22	26	30	19	18	22	17	-13
		Median			10.94	30		26	20	20	27	35	44	26	38	59	missing	29
		High			13.02	30		35	36	37	37	39	broken off	missing	missing	missing	missing	9
5	Willamette Cove	Low	N 45 34.815	W122 44.670	8.36	30		34	35	34	32	31.5	could not locate	34	missing	missing	missing	4
		Median			13.08	30		30	30	30	missing	missing	missing	missing	missing	missing	missing	0
		High			16.63	30		30	30	30	missing	missing	missing	missing	missing	missing	missing	0
6	ATOFINA	Low	N 45 34.026	W122 44.295	8	30		31	28	28	30	32	30	28	23	missing	missing	-7
		Median			10.67	30		30	23	20	22	30	28	missing	missing	missing	missing	-2
		High			18.36	30		29	28	29	27	27	missing	missing	missing	missing	missing	-3
7	GATX	Low	N 45 34.135	W122 44.401	8.05	30		35	38	39	39	43	28	38	40	missing	33	3
		Median			10.45	30		34	28	31	39	42	47	reinstalled to 30	26	missing	16	-14
		High			17.25	30		30	30	30	26	26	30	30	29	28	29	-1
8	Coast Guard	Low	N 45 34.234	W122 43.412	7.99	27		25	25	28	27	29	29	25	27	missing	missing	0
		Median			9.98	30		31	31	31	31	30	31	32	34	32	28	-2
		High			14.39	30		30	30	30	30	30	30	27	27	27	missing	-3
9	Equilon	Low	N 45 34.135	W122 43.252	7.5	30		31	38	43	44	46	43	45	48	48	50	20
		Median			9.83	30		25	13	10	11	15	27	30	12	25	19	-11
		High			14.67	30		30	29	29	29	28	31	38	38	38	38	8

Notes:
*Distance from top of stake to ground surface.
**Over available period of record.

Table 4-2. Comparison of the Direction and Magnitude of Vertical Sediment Level Changes Indicated by Bathymetric and Stake Measurement Data.

	Change in Sediment Elevation (cm)			Consistent with Direction of Bathymetric Data Vertical Change?		Consistent with Magnitude of Bathymetric Data Vertical Change?		Consistent with Both Bathymetric Direction and Magnitude?	
Location	Local Bathymetry	Low Stake	Median Stake	Low Stake	Median Stake	Low Stake	Median Stake	Low Stake	Median Stake
General Electric (PGE)	7.5D to 7.5S	3D	9D	I	No	Yes	No	No	No
Terminal 4	7.5 to 15S	1D	10D	No	No	No	Yes	No	No
Gasco	7.5D to 7.5S	5D	10D	I	No	Yes	No	No	No
Will Cove	15 to 30D	2S	No Data	No	---	No	---	No	---
ATOFINA	7.5 to 15D	1D	5D	Yes	Yes	No	Yes	Yes	Yes
GATX	7.5D to 7.5S	3S	19D	I	No	Yes	No	No	No
Coast Guard	15 to 30D	1D	1D	Yes	Yes	No	No	Yes	No
Equilon	7.5 to 15D	6D	16D	Yes	Yes	Yes	Yes	Yes	Yes

D - Deepening
S - Shallowing
I - Indeterminate

(Anchor 2004)

Table 4-3. Summary of Discharge Measurments Calculations in the May 2003 and February 2004 ADCP Surveys near Multnomah Channel.

May 2003 Survey - 6 passes over tidal cycle

Transect Location	Transect Number	Pass Number	Discharge (Q) (ft^3/sec)	Multnomah Channel (Q) Calculated Transect 5 - Transect 3 (ft^3/sec)	Multnomah Channel (Q) Measured (ft^3/sec)
RM 2.5 - downstream of MC	3	1	18923		
RM 3.1 - entrance of MC	4	1	33542		
RM 4.0 - upstream of MC	5	1	32581		
Within MC		1		13658	18693
RM 2.5 - downstream of MC	3	2	17882		
RM 3.1 - entrance of MC	4	2	36525		
RM 4.0 - upstream of MC	5	2	35737		
Within MC		2		17855	18542
RM 2.5 - downstream of MC	3	3	17662		
RM 3.1 - entrance of MC	4	3	35058		
RM 4.0 - upstream of MC	5	3	35005		
Within MC		3		17343	18194
RM 2.5 - downstream of MC	3	4	8839		
RM 3.1 - entrance of MC	4	4	21442		
RM 4.0 - upstream of MC	5	4	18358		
Within MC		4		9519	18535
RM 2.5 - downstream of MC	3	5	17995		
RM 3.1 - entrance of MC	4	5	-496		
RM 4.0 - upstream of MC	5	5	3706		
Within MC		5		-14289	15190
RM 2.5 - downstream of MC	3	6	10001		
RM 3.1 - entrance of MC	4	6	34004		
RM 4.0 - upstream of MC	5	6	36369		
Within MC		6		26368	18789

February 2004 Survey-2 passes, number one on rising tide and number two on falling tide

Transect Location	Transect Number	Pass Number	Discharge (Q) (ft^3/sec)	Multnomah Channel (Q) Calculated Transect 5 - Transect 3 (ft^3/sec)	Multnomah Channel (Q) Measured (ft^3/sec)
RM 2.5 - downstream of MC	3	1	97739		
RM 3.1 - entrance of MC	4	1	126700		
RM 4.0 - upstream of MC	5	1	125474		
Within MC	17	1		27735	31242
RM 2.5 - downstream of MC	3	2	99838		
RM 3.1 - entrance of MC	4	2	130580		
RM 4.0 - upstream of MC	5	2	130738		
Within MC	17	2		30900	31720

Table 4-4. Round 1 Summary Statistics of Chemical Concentrations in Beach Sediments.

				Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	**N**	**N Detected**	**% Detected**	**Minimum**	**Maximum**	**Location**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th UCL**
Conventionals (percent)														
Total solids	22	22	100	75.7	95.4	06B026	84.7	83.4	92.2	75.7	95.4	84.7	83.4	92.2
Total organic carbon	22	22	100	0.1	2.8	06B025	0.775	0.6	1.4	0.1	2.8	0.775	0.6	1.4
Gravel	22	22	100	0.18	18.8	05B018	7.99	10.5	14.4	0.18	18.8	7.99	10.5	14.4
Very coarse sand	22	22	100	0.4	14.1	07B023	3.88	2.84	7.19	0.4	14.1	3.88	2.84	7.19
Coarse sand	22	22	100	3.88	35.6	06B029	17.2	16.8	23.3 T	3.88	35.6	17.2	16.8	23.3 T
Medium sand	22	22	100	21.8	78.4	05B019	47.2	44.1	66.1	21.8	78.4	47.2	44.1	66.1
Fine sand	22	22	100	1.98	41.7	03B031	14.9	12.5 T	24.8	1.98	41.7	14.9	12.5 T	24.8
Very fine sand	22	22	100	0.05	10.5	03B031	3.31	2.15	7.51 T	0.05	10.5	3.31	2.15	7.51 T
Coarse silt	22	19	86.4	0.32	5.23	07B022	2.48	1.81	5.17	0.01 U	5.23	2.14	1.36	5.05 T
Medium silt	22	21	95.5	0.02	3.27	08B032	1.17	0.59	3.03	0.01 U	3.27	1.12	0.58	3.03
Fine silt	22	21	95.5	0.02	3.27	08B032	0.94	0.57	2.36	0.01 U	3.27	0.898	0.55	2.36
Very fine silt	22	22	100	0.02	2.16	08B032	0.515	0.24	1.34	0.02	2.16	0.515	0.24	1.34
8-9 Phi clay	22	21	95.5	0.02	1.7	08B032	0.375	0.14	0.82	0.01 U	1.7	0.358	0.14	0.82
9-10 Phi clay	22	20	90.9	0.02	1.23	08B032	0.309	0.15	0.79	0.01 U	1.23	0.282	0.14	0.7
>10 Phi clay	22	22	100	0.01	2.91	08B032	0.47	0.18	1.34	0.01	2.91	0.47	0.18	1.34
Metals (mg/kg)														
Aluminum	22	22	100	10100	22100	03B031	15600	15300	19800 T	10100	22100	15600	15300	19800 T
Antimony	8	8	100	0.2 J	13 J	04B024	1.91	0.3 J	0.8 J	0.2 J	13 J	1.91	0.3 J	0.8 J
Arsenic	22	22	100	0.7	9.9	06B030	2.5	2	4	0.7	9.9	2.5	2	4
Cadmium	22	22	100	0.03	0.23	06B022	0.0727	0.06	0.09 T	0.03	0.23	0.0727	0.06	0.09 T
Chromium	22	22	100	13 J	77	06B030	23	19 J	32	13 J	77	23	19 J	32
Copper	22	22	100	14.4	606	06B030	62.4	22 T	108	14.4	606	62.4	22 T	108
Lead	22	22	100	4.7	62	05B018	18.1	11.3	50	4.7	62	18.1	11.3	50
Mercury	22	1	4.55	0.18	0.18	06B026	0.18	0.18	0.18	0.04 U	0.18	0.0555	0.05 U	0.06 U
Nickel	22	22	100	14 J	69	06B025	23.9	21 J	37 JT	14 J	69	23.9	21 J	37 JT
Selenium	22	0	0							0.2 UJ	0.3 UJ	0.209	0.2 U	0.2 U
Silver	22	3	13.6	0.02 J	0.2	06B030	0.08	0.02 T	0.02 T	0.02 UJ	0.2	0.0291	0.02 UJ	0.03 UJ
Zinc	22	22	100	55	138	06B022	82.1	73	116	55	138	82.1	73	116
PCB Aroclors (ug/kg)														
Aroclor 1016	22	0	0							3.8 U	4 U	3.87	3.9 U	3.9 UT
Aroclor 1242	22	0	0							3.8 U	4 U	3.87	3.9 U	3.9 UT
Aroclor 1248	22	1	4.55	8	8	03B031	8	8	8	3.8 U	8	4.16	3.9 U	4 U
Aroclor 1254	22	8	36.4	2.5 J	29	06B025	13.5	8.8	26	2.5 J	29	9.5	3.9 U	23 U
Aroclor 1260	22	7	31.8	3.4 J	54	09B027	14.5	9.9 J	16	3.4 J	54	11.7	3.9 U	25 U
Aroclor 1221	22	0	0							7.5 U	7.9 U	7.73	7.7 U	7.9 U
Aroclor 1232	22	0	0							3.8 U	4 U	3.87	3.9 U	3.9 UT
Total PCB Aroclors	22	12	54.5	2.5 JT	80 T	09B027	18.2	10 T	29 T	2.5 JT	80 T	15.9	7.9 UT	29 T
Organochlorine Pesticides (ug/kg)														
2,4'-DDD	22	3	13.6	0.91	89	07B024	34	12	12	0.38 U	89	5.36	0.39 UT	7.7 U
2,4'-DDE	22	1	4.55	26	26	07B024	26	26	26	0.38 U	200 U	11.7	0.86 U	9.2 U
2,4'-DDT	22	2	9.09	15	45	07B024	30	15	15	0.38 U	45	3.41	0.39 U	7.7 U
4,4'-DDD	22	6	27.3	1.1	40	07B024	11.9	1.8	24	0.38 U	40	3.93	0.39 UT	9 U
4,4'-DDE	22	2	9.09	20	78	07B024	49	20	20	0.38 U	78	5.36	0.39 U	7.7 U
4,4'-DDT	22	4	18.2	0.75	94	07B024	35.4	0.84	46	0.38 U	94	7.63	0.75	12 U
Total of 3 isomers: pp-DDT,-DDD,-DDE	22	6	27.3	1.5 T	212 T	07B024	51.8	2.55 T	90 T	0.38 UT	212 T	15.3	1.1 UT	12 UT

Table 4-4. Round 1 Summary Statistics of Chemical Concentrations in Beach Sediments.

		N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
Aldrin	22	0	0							0.19 U	3.9 U	0.371	0.19 U	0.2 UT
alpha-Hexachlorocyclohexane	22	0	0							0.19 U	3.9 U	0.361	0.19 U	0.2 U
beta-Hexachlorocyclohexane	22	0	0							0.19 U	42 U	2.32	0.19 U	0.31 U
delta-Hexachlorocyclohexane	22	0	0							0.19 U	3.9 U	0.361	0.19 UJ	0.2 U
gamma-Hexachlorocyclohexane	22	0	0							0.19 U	3.9 U	0.363	0.19 U	0.2 UT
cis-Chlordane	22	1	4.55	3.2 J	3.2 J	04B024	3.2	3.2 J	3.2 J	0.19 U	3.9 U	0.517	0.19 U	0.56 U
trans-Chlordane	22	1	4.55	2.7	2.7	04B024	2.7	2.7	2.7	0.19 U	4.1 U	0.678	0.19 U	2.7
Oxychlordane	22	0	0							0.38 U	7.7 U	0.725	0.39 U	0.4 U
cis-Nonachlor	22	0	0							0.38 U	7.7 U	0.816	0.39 U	1.3 U
trans-Nonachlor	22	0	0							0.38 U	7.7 U	0.72	0.39 U	0.39 U
Dieldrin	22	0	0							0.38 U	7.7 U	0.804	0.39 U	1.3 U
alpha-Endosulfan	22	0	0							0.19 U	3.9 U	0.361	0.19 U	0.2 U
beta-Endosulfan	22	0	0							0.38 U	7.7 U	0.72	0.39 U	0.39 U
Endosulfan sulfate	22	0	0							0.38 U	7.7 U	0.785	0.39 U	0.51 U
Endrin	22	0	0							0.38 U	13 U	0.96	0.39 U	0.39 U
Endrin aldehyde	22	0	0							0.38 U	11 U	0.998	0.39 U	1.2 U
Endrin ketone	22	0	0							0.38 U	20 U	1.36	0.39 U	1.1 U
Heptachlor	22	0	0							0.19 U	3.9 U	0.362	0.19 U	0.2 UT
Heptachlor epoxide	22	0	0							0.19 U	3.9 U	0.383	0.19 U	0.37 U
Methoxychlor	22	0	0							1.9 U	39 U	3.65	1.9 U	2 UT
Mirex	22	0	0							0.38 U	55 U	2.95	0.39 U	0.4 U
Toxaphene	22	0	0							19 U	680 U	52.3	19 U	38 U
Semivolatile Organic Compounds (ug/kg)														
1,2,4-Trichlorobenzene	22	0	0							19 U	98 U	22.7	19 U	20 U
1,2-Dichlorobenzene	22	0	0							19 U	98 U	22.7	19 U	20 U
1,3-Dichlorobenzene	22	0	0							19 U	98 U	22.7	19 U	20 U
1,4-Dichlorobenzene	22	0	0							19 U	98 U	22.7	19 U	20 U
Azobenzene	22	0	0							19 U	98 U	22.7	19 U	20 U
Bis(2-chloro-1-methylethyl) ether	22	0	0							19 U	98 U	22.7	19 U	20 U
2,4-Dinitrotoluene	22	0	0							94 U	490 U	114	96 U	98 U
2,6-Dinitrotoluene	22	0	0							94 U	490 U	114	96 U	98 U
2-Chloronaphthalene	22	0	0							19 U	98 U	22.7	19 U	20 U
2-Nitroaniline	22	0	0							94 U	490 U	114	96 U	98 U
3,3'-Dichlorobenzidine	22	0	0							94 UJ	490 U	114	96 U	98 U
3-Nitroaniline	22	0	0							110 U	590 U	138	120 U	120 U
4-Bromophenyl phenyl ether	22	0	0							19 U	98 U	22.7	19 U	20 U
4-Chloroaniline	22	0	0							56 U	290 U	68.3	58 U	59 U
4-Chlorophenyl phenyl ether	22	0	0							19 U	98 U	22.7	19 U	20 U
4-Nitroaniline	22	0	0							94 U	490 U	114	96 U	98 U
Aniline	22	0	0							19 U	98 U	22.7	19 U	20 U
Benzoic acid	22	0	0							190 U	980 UJ	227	190 U	200 UJ
Benzyl alcohol	22	0	0							94 U	490 U	114	96 U	98 U
Bis(2-chloroethoxy) methane	22	0	0							19 U	98 U	22.7	19 U	20 U
Bis(2-chloroethyl) ether	22	0	0							38 U	200 U	45.9	38 U	39 U
Carbazole	22	8	36.4	2.6 T	2800 T	06B025	355	5.4 T	16 T	1.9 UT	2800 T	131	2.6 T	9.5 UT
Dibenzofuran	22	5	22.7	3.2 T	560 T	06B025	117	4.9 T	11 T	1.9 UT	560 T	28.7	2 UT	9.5 UT

Table 4-4. Round 1 Summary Statistics of Chemical Concentrations in Beach Sediments.

		N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	**N**	**Detected**	**Detected**	**Minimum**	**Maximum**	**Location**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th UCL**
Hexachlorobenzene	22	1	4.55	0.66 T	0.66 T	07B024	0.66	0.66 T	0.66 T	0.19 UT	3.9 UT	0.382	0.19 UT	0.2 UT
Hexachlorobutadiene	22	0	0							0.2 UT	3.9 UT	0.598	0.37 UJT	0.8 UT
Hexachlorocyclopentadiene	22	0	0							94 U	490 U	114	96 U	98 U
Hexachloroethane	22	0	0							1.9 UT	98 UT	7.06	1.9 UT	4 UT
Isophorone	22	0	0							19 U	98 U	22.7	19 U	20 U
Nitrobenzene	22	0	0							19 U	98 U	22.7	19 U	20 U
N-Nitrosodimethylamine	22	0	0							94 U	490 U	114	96 U	98 U
N-Nitrosodipropylamine	22	0	0							38 U	200 U	45.9	38 U	39 U
N-Nitrosodiphenylamine	22	0	0							19 U	98 U	22.7	19 U	20 U
Phenols (ug/kg)														
2,3,4,6-Tetrachlorophenol	22	0	0							94 U	490 U	114	96 U	98 U
2,4,5-Trichlorophenol	22	0	0							94 U	490 U	114	96 U	98 U
2,4,6-Trichlorophenol	22	0	0							94 U	490 U	114	96 U	98 U
2,4-Dichlorophenol	22	0	0							56 U	290 U	68.3	58 U	59 U
2,4-Dimethylphenol	22	0	0							56 U	290 U	68.3	58 U	59 U
2,4-Dinitrophenol	22	0	0							190 U	980 UJ	227	190 U	200 UJ
2-Chlorophenol	22	0	0							19 U	98 U	22.7	19 U	20 U
2-Methylphenol	22	0	0							19 U	98 U	22.7	19 U	20 U
2-Nitrophenol	22	0	0							94 U	490 U	114	96 U	98 U
4,6-Dinitro-2-methylphenol	22	0	0							190 U	980 UJ	227	190 U	200 UJ
4-Chloro-3-methylphenol	22	0	0							38 U	200 U	45.9	38 U	39 U
4-Methylphenol	22	0	0							19 U	98 U	22.7	19 U	20 U
4-Nitrophenol	22	0	0							94 UJ	490 U	114	96 U	98 U
Pentachlorophenol	22	1	4.55	22 T	22 T	07B023	22	22 T	22 T	9.4 UT	490 UT	36	9.7 UT	22 T
Phenol	22	0	0							38 U	200 U	45.9	38 U	39 U
2,3,4,5-Tetrachlorophenol	22	0	0							94 U	490 U	114	96 U	98 U
2,3,5,6-Tetrachlorophenol	22	0	0							94 U	490 U	114	96 U	98 U
Phthalates (ug/kg)														
Dimethyl phthalate	22	0	0							19 U	98 U	22.7	19 U	20 U
Diethyl phthalate	22	1	4.55	48	48	06B030	48	48	48	19 U	98 U	24	19 U	20 U
Dibutyl phthalate	22	8	36.4	26	190	06B030	52.9	27 T	57	19 U	190	35	20 U	57
Butylbenzyl phthalate	22	0	0							19 U	98 U	22.7	19 U	20 U
Di-n-octyl phthalate	22	0	0							19 U	98 U	22.7	19 U	20 U
Bis(2-ethylhexyl) phthalate	22	19	86.4	20	230	05B018	65.2	49	210	19 U	230	62.5	46	98 U
Polycyclic Aromatic Hydrocarbons (ug/kg)														
2-Methylnaphthalene	22	1	4.55	2200	2200	06B025	2200	2200	2200	19 U	2200	118	19 U	20 U
Acenaphthene	22	1	4.55	3600	3600	06B025	3600	3600	3600	19 U	3600	182	19 U	20 U
Acenaphthylene	22	3	13.6	51	5000	06B025	1710	71	71	19 U	5000	249	19 U	51
Anthracene	22	3	13.6	33	8000	06B025	2690	46	46	19 U	8000	384	19 U	33
Fluorene	22	1	4.55	3600	3600	06B025	3600	3600	3600	19 U	3600	182	19 U	20 U
Naphthalene	22	4	18.2	23	7000	06B025	1770	25	41	19 U	7000	338	19 U	25
Phenanthrene	22	10	45.5	26	47000	06B025	4770	49	320	19 U	47000	2180	20 U	57
Low Molecular Weight PAH	22	10	45.5	26 T	76400 T	06B025	7730	49 T	442 T	19 UT	76400 T	3530	20 UT	178 T
Dibenz(a,h)anthracene	22	10	45.5	1.9 JT	9500 JT	06B025	965	12 JT	59 T	1.9 UT	9500 JT	440	2.5 JT	26 JT
Benz(a)anthracene	22	21	95.5	4.8 T	29000 T	06B025	1410	13 T	140 T	1.9 UT	29000 T	1350	9.8 T	140 T
Benzo(a)pyrene	22	21	95.5	4.2 T	41000 T	06B025	2000	14 T	320 T	1.9 UT	41000 T	1910	9 T	320 T

Table 4-4. Round 1 Summary Statistics of Chemical Concentrations in Beach Sediments.

		N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
Benzo(b)fluoranthene	22	22	100	2.1 T	31000 T	06B025	1450	10 T	250 T	2.1 T	31000 T	1450	10 T	250 T
Benzo(g,h,i)perylene	22	22	100	1.9 T	36000 T	06B025	1670	15 T	220 T	1.9 T	36000 T	1670	15 T	220 T
Benzo(k)fluoranthene	22	22	100	2.7 T	24000 T	06B025	1130	10 T	220 T	2.7 T	24000 T	1130	10 T	220 T
Chrysene	22	22	100	3.6 T	38000 T	06B025	1770	12.5 T	230 T	3.6 T	38000 T	1770	12.5 T	230 T
Fluoranthene	22	14	63.6	24	68000	06B025	4950	56	520	19 U	68000	3160	26	250
Indeno(1,2,3-cd)pyrene	22	21	95.5	4.4 T	31000 T	06B025	1510	13 T	220 T	1.9 UT	31000 T	1440	11 T	220 T
Pyrene	22	14	63.6	20	80000	06B025	5830	69	700	19 U	80000	3720	24 T	280
High Molecular Weight PAH	22	22	100	10.3 T	388000 JT	06B025	18100	112 T	2280 T	10.3 T	388000 JT	18100	112 T	2280 T
Polycyclic Aromatic Hydrocarbons	22	22	100	10.3 T	464000 JT	06B025	21600	161 JT	2460 T	10.3 T	464000 JT	21600	161 JT	2460 T
Herbicides (ug/kg)														
Dalapon	22	0	0							15 UJ	36 U	16.7	16 U	16 U
Dicamba	22	0	0							3 U	3.3 UJ	3.16	3.2 U	3.3 UJ
MCPA	22	0	0							3100 U	14000 U	3860	3200 U	3300 U
Dichloroprop	22	0	0							6.2 UJ	29 UJ	8.45	6.4 UJ	17 UJ
2,4-D	22	0	0							6.1 U	7.4 UJ	6.39	6.3 UJ	6.5 UJ
Silvex	22	0	0							1.5 UJ	4 UJ	1.72	1.6 UJ	1.7 UJ
2,4,5-T	22	0	0							1.5 UJ	9.3 UJ	2.13	1.6 U	1.9 U
2,4-DB	22	0	0							31 U	220 U	58.7	35 U	110 U
Dinoseb	22	0	0							3 U	3.3 U	3.16	3.2 UJ	3.3 U
MCPP	22	0	0							3000 U	3300 U	3160	3200 U	3300 U

Notes:

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table 4-5. Round 1 Summary Statistics of Chemical Concentrations in River Sediments.

				Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
Conventionals (percent)														
Total solids	46	46	100	38.1	77.7	05R001	59.9	60	72.4	38.1	77.7	59.9	60	72.4
Total organic carbon	46	46	100	0.59	2.9 T	06R002	1.66	1.6	2.5	0.59	2.9 T	1.66	1.6	2.5
Gravel	46	44	95.7	0.01	33.8 T	09R001	3.42	1.59	6.96	0.01 U	33.8 T	3.27	1.54 T	6.96
Very coarse sand	46	46	100	0.27	18.4	09R001	2.62	1.13	5.8	0.27	18.4	2.62	1.13	5.8
Coarse sand	46	46	100	0.54	24.7	06R004	9.12	8.47	18.8 T	0.54	24.7	9.12	8.47	18.8 T
Medium sand	46	46	100	0.87	64.1	03R034	26.2	26.1	52.6 T	0.87	64.1	26.2	26.1	52.6 T
Fine sand	46	46	100	3.12	37.2	05R003	14.9	12.2 T	29.3	3.12	37.2	14.9	12.2 T	29.3
Very fine sand	46	46	100	0.67	39.9	09R041	11.6	9.57	22.4	0.67	39.9	11.6	9.57	22.4
Coarse silt	46	46	100	0.25	36.2	09R002	12.4	8.99	33.1	0.25	36.2	12.4	8.99	33.1
Medium silt	46	46	100	0.69	23	07R040	7.58	4.88	17.2	0.69	23	7.58	4.88	17.2
Fine silt	46	46	100	0.53	14.2	03R041	4.87	3.11	10.5	0.53	14.2	4.87	3.11	10.5
Very fine silt	46	46	100	0.4	10	03R041	3.17	2.24	6.86	0.4	10	3.17	2.24	6.86
8-9 Phi clay	46	46	100	0.11	4.83	03R041	1.62	1.18	3.33	0.11	4.83	1.62	1.18	3.33
9-10 Phi clay	46	45	97.8	0.17	3.19	03R041	1.23	0.96	2.63	0.01 U	3.19	1.2	0.87	2.63
>10 Phi clay	46	46	100	0.13	5.07	03R041	1.53	1.1	3.7	0.13	5.07	1.53	1.1	3.7
Metals (mg/kg)														
Aluminum	46	46	100	14100	34800	07R040	22800	21700 T	32500	14100	34800	22800	21700 T	32500
Antimony	14	14	100	0.3 J	1.5 J	04R002	0.629	0.5 JT	1 J	0.3 J	1.5 J	0.629	0.5 JT	1 J
Arsenic	46	46	100	1.5	10.3	04R002	4.06	3.7	7.8	1.5	10.3	4.06	3.7	7.8
Cadmium	46	46	100	0.04	4.5	04R002	0.414	0.19	1.5	0.04	4.5	0.414	0.19	1.5
Chromium	46	46	100	15.6	95	02R015	30.3	28	44.9	15.6	95	30.3	28	44.9
Copper	46	46	100	16.3	134	04R002	48.7	40	103 T	16.3	134	48.7	40	103 T
Lead	46	45	97.8	4.7	820	04R002	55.8	23	110	4.7	820	54.8	22	110
Mercury	46	18	39.1	0.06	0.94 JT	06R002	0.25	0.13	0.64 J	0.05 U	0.94 JT	0.142	0.08 UJ	0.52
Nickel	46	46	100	16.5 T	65	07R006	23.9	23	29	16.5 T	65	23.9	23	29
Selenium	46	1	2.17	0.4	0.4	09R002	0.4	0.4	0.4	0.3 U	0.5 U	0.35	0.3 U	0.5 U
Silver	46	30	65.2	0.03 T	2.1	04R002	0.201	0.08 JT	0.46	0.03 UJ	2.1	0.142	0.06 J	0.315 T
Zinc	46	46	100	54.8	813	02R015	157	106	303 T	54.8	813	157	106	303 T
Butyltins (ug/kg)														
Tributyltin ion	5	5	100	14.2	57	03R005	32	27.6	38.8 T	14.2	57	32	27.6	38.8 T
Monobutyltin trichloride	3	3	100	8.2 J	28 J	03R004	15.3	9.6 J	9.6 J	8.2 J	28 J	15.3	9.6 J	9.6 J
Dibutyltin dichloride	4	4	100	17 J	34 J	03R004	29.3	32 J	34 JT	17 J	34 J	29.3	32 J	34 JT
Tributyltin chloride	5	5	100	16	64	03R005	35.9	31	43.5 T	16	64	35.9	31	43.5 T
Tetrabutyltin	5	0	0							5.8 UT	5.9 U	5.86	5.9 U	5.9 U
PCB Aroclors (ug/kg)														
Aroclor 1016	46	0	0							3.8 U	1300 U	59.3	3.9 U	39 U
Aroclor 1242	46	3	6.52	54	220 T	03R004	141	150	150	3.8 U	1300 U	67.9	3.9 U	150
Aroclor 1248	46	6	13	8.4	730	02R001	253	13 J	680	3.8 U	1300 U	102	6.4 U	680
Aroclor 1254	46	20	43.5	4.7	1500	03R005	162	18	500	3.9 U	2200 U	157	18	500
Aroclor 1260	46	19	41.3	6.8	110	08R040	35.5	21	98	3.8 U	1300 U	102	15	340 U
Aroclor 1221	46	0	0							7.6 U	2600 U	116	7.8 U	78 U
Aroclor 1232	46	0	0							3.8 U	1300 U	59.3	3.9 U	39 U
Total PCB Aroclors	46	31	67.4	6.6 T	1500 T	03R005	189	30 T	1090 T	6.6 T	2600 UT	239	26 UT	1180 T
Organochlorine Pesticides (ug/kg)														
2,4'-DDD	45	3	6.67	4.9	710	07R006	240	6.1 J	6.1 J	0.38 U	710	21.1	1.1 UT	13 UJ
2,4'-DDE	44	1	2.27	1000	1000	07R006	1000	1000	1000	0.38 U	1000	31	3.9 U	23 U
2,4'-DDT	45	3	6.67	8.1	690	07R006	240	22	22	0.38 U	690	20.7	0.4 U	20 UJ
4,4'-DDD	46	20	43.5	0.35 J	930	07R006	52.7	4.7	22 J	0.35 J	930	27.6	2.5 U	22 J
4,4'-DDE	44	18	40.9	0.47	330	07R006	22.2	2.4	18	0.38 U	330	14.4	2.6 U	15 UJ

Table 4-5. Round 1 Summary Statistics of Chemical Concentrations in River Sediments.

				Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
4,4'-DDT	45	11	24.4	2.8 T	9300	07R006	901	34	210	0.38 U	9300	224	4 U	88
Total of 3 isomers: pp-DDT,-DDD,-DDE	46	23	50	0.82 JT	10600 T	07R006	496	7.9 T	200 T	0.38 UT	10600 T	252	6.5 UT	104 JT
Aldrin	45	0	0							0.19 U	66 U	3.83	0.2 U	9.6 U
alpha-Hexachlorocyclohexane	45	0	0							0.19 U	65 U	2.92	0.2 U	2 U
beta-Hexachlorocyclohexane	45	0	0							0.19 U	74 U	4.36	1.1 U	3.6 U
delta-Hexachlorocyclohexane	45	0	0							0.19 UJ	65 UJ	2.89	0.2 U	2 UJ
gamma-Hexachlorocyclohexane	45	2	4.44	22	430	07R006	226	22	22	0.19 U	430	11.8	0.2 U	2 U
cis-Chlordane	45	0	0							0.19 U	65 U	3.37	0.25 U	6.7 U
trans-Chlordane	45	0	0							0.19 U	230 U	7.64	0.48 U	5.2 U
Oxychlordane	45	0	0							0.38 U	130 U	7.23	0.39 U	16 U
cis-Nonachlor	44	0	0							0.38 U	130 U	6.87	0.72 U	6 U
trans-Nonachlor	44	0	0							0.38 U	130 U	6.02	0.39 U	3.9 U
Dieldrin	45	0	0							0.35 U	270 U	11.1	0.7 U	14 U
alpha-Endosulfan	45	0	0							0.19 U	65 U	3.17	0.2 U	3.7 U
beta-Endosulfan	45	3	6.67	12	26.5 T	06R002	20.5	23	23	0.38 U	130 U	7.33	0.39 U	23
Endosulfan sulfate	44	0	0							0.38 U	130 U	8.67	0.39 U	29 UT
Endrin	45	0	0							0.38 U	130 U	6.11	0.39 U	3.9 U
Endrin aldehyde	45	0	0							0.38 U	130 U	6.98	0.62 U	6.5 U
Endrin ketone	45	0	0							0.38 U	130 U	6.76	0.4 U	7.5 UJ
Heptachlor	45	0	0							0.19 U	65 U	2.89	0.2 U	2 U
Heptachlor epoxide	45	0	0							0.19 U	65 U	3.62	0.2 U	16 U
Methoxychlor	45	0	0							1.9 U	650 U	30.8	2 U	20 U
Mirex	45	3	6.67	1.2	1.6	03R041	1.37	1.3	1.3	0.38 U	130 U	7.06	0.79 U	13 U
Toxaphene	44	0	0							19 U	6500 U	336	20 U	380 U
Semivolatile Organic Compounds (ug/kg)														
1,2,4-Trichlorobenzene	46	1	2.17	130 J	130 J	07R006	130	130 J	130 J	10 UJT	230 U	37.7	20 U	110 U
1,2-Dichlorobenzene	46	0	0							2 UJT	230 U	35.1	20 U	79 U
1,3-Dichlorobenzene	46	0	0							2 UJT	230 U	35.1	20 U	79 U
1,4-Dichlorobenzene	46	1	2.17	27 J	27 J	07R006	27	27 J	27 J	2 UJT	230 U	35.3	20 U	79 U
Azobenzene	46	0	0							19 U	230 U	36.3	20 U	79 U
Bis(2-chloro-1-methylethyl) ether	46	0	0							19 U	230 U	36.3	20 U	79 U
2,4-Dinitrotoluene	46	0	0							96 UT	1200 U	182	98 UJ	390 UT
2,6-Dinitrotoluene	46	0	0							96 UT	1200 U	182	98 U	390 UT
2-Chloronaphthalene	46	0	0							19 U	230 U	36.3	20 U	79 U
2-Nitroaniline	46	0	0							96 UT	1200 U	182	98 U	390 UT
3,3'-Dichlorobenzidine	46	0	0							96 UJT	1200 U	182	98 U	390 UJT
3-Nitroaniline	46	0	0							120 U	1400 U	220	120 U	470 UT
4-Bromophenyl phenyl ether	46	0	0							19 U	230 U	36.3	20 U	79 U
4-Chloroaniline	46	0	0							58 U	700 U	109	59 U	240 U
4-Chlorophenyl phenyl ether	46	0	0							19 U	230 U	36.3	20 U	79 U
4-Nitroaniline	46	0	0							96 UT	1200 U	182	98 U	390 UT
Aniline	46	0	0							19 U	230 U	36.3	20 U	79 U
Benzoic acid	46	8	17.4	200	260 J	06R040	221	220 J	225 T	190 U	2300 UJ	368	200 U	790 U
Benzyl alcohol	46	0	0							96 UT	1200 U	182	98 U	390 UT
Bis(2-chloroethoxy) methane	46	0	0							19 U	230 U	36.3	20 U	79 U
Bis(2-chloroethyl) ether	46	0	0							38 U	470 U	73.2	39 U	160 UT
Carbazole	46	42	91.3	2.7 T	3900 T	04R002	271	30 T	760 T	2 UT	3900 T	248	24 T	760 T
Dibenzofuran	46	33	71.7	6.5 T	1500 T	06R031	162	43 T	880 T	1.9 UT	1500 T	117	20 T	330 T
Hexachlorobenzene	46	7	15.2	0.28 T	71 JT	07R006	11.1	1.2 T	2.7 T	0.19 UT	71 JT	2.9	0.22 UT	2.7 T
Hexachlorobutadiene	46	1	2.17	76 T	76 T	07R006	76	76 T	76 T	0.19 UT	76 T	3.73	0.3 UT	2 UJT

Table 4-5. Round 1 Summary Statistics of Chemical Concentrations in River Sediments.

		N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
Hexachlorocyclopentadiene	46	0	0							96 UT	1200 U	182	98 UJ	390 UT
Hexachloroethane	46	1	2.17	550 T	550 T	07R006	550	550 T	550 T	1.9 UT	550 T	21.2	5.9 UT	20 UT
Isophorone	46	0	0							19 U	230 U	36.3	20 U	79 U
Nitrobenzene	46	0	0							19 U	230 UJ	36.6	20 UJ	79 U
N-Nitrosodimethylamine	46	0	0							96 UT	1200 U	182	98 U	390 UT
N-Nitrosodipropylamine	46	0	0							38 UJ	470 U	73.2	39 UJ	160 UT
N-Nitrosodiphenylamine	46	0	0							19 U	230 U	36.3	20 U	79 U
Phenols (ug/kg)														
2,3,4,6-Tetrachlorophenol	46	0	0							96 UT	1200 U	182	98 U	390 UT
2,4,5-Trichlorophenol	46	0	0							96 UT	1200 U	182	98 U	390 UT
2,4,6-Trichlorophenol	46	0	0							96 UT	1200 U	182	98 U	390 UT
2,4-Dichlorophenol	46	0	0							58 U	700 U	109	59 U	240 U
2,4-Dimethylphenol	46	1	2.17	300	300	09R002	300	300	300	58 U	700 U	110	59 U	300
2,4-Dinitrophenol	46	0	0							190 U	2300 UJ	363	200 UJ	790 U
2-Chlorophenol	46	0	0							19 U	230 U	36.3	20 U	79 U
2-Methylphenol	46	0	0							19 U	230 U	36.3	20 U	79 U
2-Nitrophenol	46	0	0							96 UT	1200 U	182	98 U	390 UT
4,6-Dinitro-2-methylphenol	46	0	0							190 U	2300 UJ	363	200 UJ	790 U
4-Chloro-3-methylphenol	46	0	0							38 UJ	470 U	73.2	39 UJ	160 UT
4-Methylphenol	46	21	45.7	21	175 T	09R001	64.2	73	84	19 U	230 U	52	24	120 U
4-Nitrophenol	46	0	0							96 UJT	1200 U	182	98 UJ	390 UT
Pentachlorophenol	46	13	28.3	2.9 JT	420 T	06R031	147	140 T	250 JT	2.9 JT	420 T	75.8	30 UJT	220 T
Phenol	46	1	2.17	460 J	460 J	03R005	460	460 J	460 J	38 UJ	470 U	78	39 UJ	160 UT
2,3,4,5-Tetrachlorophenol	46	0	0							96 UT	1200 U	182	98 U	390 UT
2,3,5,6-Tetrachlorophenol	46	0	0							96 UT	1200 U	182	98 U	390 UT
Phthalates (ug/kg)														
Dimethyl phthalate	46	0	0							19 U	230 U	36.3	20 U	79 U
Diethyl phthalate	46	0	0							19 U	230 U	36.3	20 U	79 U
Dibutyl phthalate	46	5	10.9	20	240	07R006	83.4	44 T	85	19 U	240	44.5	20 U	110 U
Butylbenzyl phthalate	46	15	32.6	33	760	08R001	131	58	230 T	19 U	760	68.9	20 U	200
Di-n-octyl phthalate	46	5	10.9	24	5590 T	09R001	1140	31 T	46 T	19 U	5590 T	157	20 UT	110 U
Bis(2-ethylhexyl) phthalate	46	33	71.7	26	9700	03R004	1020	250	2550 T	26	19000 U	1180	200	2550 T
PAHs (ug/kg)														
2-Methylnaphthalene	46	19	41.3	26	2000	06R031	304	86	1400	19 U	2000	145	33	540
Acenaphthene	46	22	47.8	31 JT	17000	05R040	1340	130 J	3400	19 U	17000	656	47 J	690
Acenaphthylene	46	23	50	20	5600	05R040	463	64	1400	19 UT	5600	251	39	290
Anthracene	46	31	67.4	21	25000	05R040	1370	120	4200	19 UT	25000	936	58 U	2100
Fluorene	46	25	54.3	21	8100	05R040	717	110	2200	19 U	8100	404	56	1000
Naphthalene	46	23	50	22	4700	06R031	544	150	1400	10 UJT	4700	289	58 U	1000
Phenanthrene	46	43	93.5	29	58000	05R040	2950	250	7800	20 U	58000	2760	235 T	7800
Low Molecular Weight PAH	46	43	93.5	29 T	117000 T	05R040	5730	484 JT	21500 T	20 UT	117000 T	5360	380 T	21500 T
Dibenz(a,h)anthracene	46	39	84.8	2.3 T	3700 J	04R002	287	40 JT	880 T	1.9 UT	3700 J	244	30 JT	860 T
Benz(a)anthracene	46	46	100	7.4 T	30000 T	04R002	1810	150 T	6000 T	7.4 T	30000 T	1810	150 T	6000 T
Benzo(a)pyrene	46	46	100	8.6 T	37000 T	04R002	2170	170 T	3900 T	8.6 T	37000 T	2170	170 T	3900 T
Benzo(b)fluoranthene	46	46	100	8.4 T	34000 T	04R002	2110	200 T	5900 T	8.4 T	34000 T	2110	200 T	5900 T
Benzo(g,h,i)perylene	46	46	100	10 T	25000 T	04R002	1090	82.5 T	2200 T	10 T	25000 T	1090	82.5 T	2200 T
Benzo(k)fluoranthene	46	46	100	11 JT	30000 T	04R002	1440	185 JT	3400 T	11 JT	30000 T	1440	185 JT	3400 T
Chrysene	46	46	100	10 JT	42000 T	05R040	2430	240 T	7500 T	10 JT	42000 T	2430	240 T	7500 T
Fluoranthene	46	45	97.8	24	93000	05R040	4760	550 J	15000	20 U	93000	4660	420	15000
Indeno(1,2,3-cd)pyrene	46	46	100	8.5 T	32000	04R002	1320	96 T	2600 T	8.5 T	32000	1320	96 T	2600 T

Table 4-5. Round 1 Summary Statistics of Chemical Concentrations in River Sediments.

		N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	**N**	**Detected**	**Detected**	**Minimum**	**Maximum**	**Location**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th UCL**
Pyrene	46	45	97.8	24	94000	05R040	4400	440	11000 J	20 UJ	94000	4310	430	11000 J
High Molecular Weight PAH	46	46	100	67.7 JT	343000 T	05R040	21600	2080 JT	54900 JT	67.7 JT	343000 T	21600	2080 JT	54900 JT
Polycyclic Aromatic Hydrocarbons	46	46	100	67.7 JT	460000 T	05R040	26900	2430 JT	67200 JT	67.7 JT	460000 T	26900	2430 JT	67200 JT
Herbicides (ug/kg)														
Dalapon	46	0	0							15 UT	450 U	57.9	16 U	220 U
Dicamba	46	0	0							3.1 U	16 UJ	3.48	3.2 U	3.3 U
MCPA	46	0	0							3100 U	67000 U	7650	3200 U	32000 U
Dichloroprop	46	0	0							6.2 U	130 UJ	11	6.5 U	15 U
2,4-D	46	0	0							6.2 UT	130 UJ	9.47	6.5 U	6.7 U
Silvex	46	0	0							1.5 UJ	43 U	4.57	1.6 U	19 U
2,4,5-T	46	0	0							1.5 UJ	190 U	14.3	1.8 U	58 U
2,4-DB	46	0	0							22 U	270 U	49.4	33 U	120 U
Dinoseb	46	0	0							2.9 UJ	20 UJ	3.93	3.2 U	3.3 U
MCPP	46	0	0							3100 UJ	91000 U	6450	3200 U	10000 U
PCB Congeners (pg/g)														
PCB001	11	11	100	1.95 T	872	03R004	114	11.6	155	1.95 T	872	114	11.6	155
PCB002	11	11	100	1.25 T	94.3	03R004	21.1	8.54	39.5	1.25 T	94.3	21.1	8.54	39.5
PCB003	11	11	100	2.22 T	507	03R004	74.5	10.5	110	2.22 T	507	74.5	10.5	110
PCB004	11	11	100	5.86 T	9070	03R004	1090	308	784	5.86 T	9070	1090	308	784
PCB005	11	11	100	0.209 T	520	03R004	52.9	1.29	33	0.209 T	520	52.9	1.29	33
PCB006	11	11	100	3.07 T	5100	03R004	542	14.7	410	3.07 T	5100	542	14.7	410
PCB007	11	10	90.9	0.963	1040	03R004	122	2.58	75.6	0.696 UT	1040	111	2.58	75.6
PCB008	11	11	100	12.8	22500	03R004	2390	49.6	1780	12.8	22500	2390	49.6	1780
PCB009	11	11	100	0.885 T	1830	03R004	186	4	123	0.885 T	1830	186	4	123
PCB010	11	11	100	0.351 T	474	03R004	57.6	14.2	39.7	0.351 T	474	57.6	14.2	39.7
PCB011	11	11	100	11.9	935 T	09R002	157	59.1	235	11.9	935 T	157	59.1	235
PCB012 & 013	11	11	100	1.86 JT	1230 J	03R004	159	12.1 J	224 J	1.86 JT	1230 J	159	12.1 J	224 J
PCB014	11	5	45.5	0.198	5.44	07R006	1.31	0.284 T	0.393 T	0.161 U	5.44	1.08	0.284 T	3.95 U
PCB015	11	11	100	17.2 T	10200	03R004	1410	68.6	1540	17.2 T	10200	1410	68.6	1540
PCB016	11	11	100	11.3 T	17100	03R004	1950	54.7	1760	11.3 T	17100	1950	54.7	1760
PCB017	11	11	100	14.5 T	17500	03R004	2190	243	2160	14.5 T	17500	2190	243	2160
PCB018 & 030	11	11	100	25.5 JT	35500 J	03R004	4190	139 J	4060 J	25.5 JT	35500 J	4190	139 J	4060 J
PCB019	11	11	100	7.68 T	4660	03R004	883	660	1230	7.68 T	4660	883	660	1230
PCB020 & 028	11	11	100	63.2 JT	38200 J	03R004	6670	559 J	13700 J	63.2 JT	38200 J	6670	559 J	13700 J
PCB021 & 033	11	11	100	25.5 JT	24900 J	03R004	2940	105 J	3870 J	25.5 JT	24900 J	2940	105 J	3870 J
PCB022	11	11	100	17.7 T	16500	03R004	2240	118	2620	17.7 T	16500	2240	118	2620
PCB023	11	9	81.8	0.161	74.4	03R004	11.6	2.14	18.3	0.144 UT	74.4	9.57	0.436 U	18.3
PCB024	11	9	81.8	0.458 T	599	03R004	83.7	15 T	80.9	0.144 UT	599	68.5	1.66	80.9
PCB025	11	11	100	4.77 T	3490	03R004	506	41.5	1000	4.77 T	3490	506	41.5	1000
PCB026 & 029	11	11	100	9.55 JT	8320 J	03R004	1130	50.8 J	1760 J	9.55 JT	8320 J	1130	50.8 J	1760 J
PCB027	11	11	100	3.41 T	2880	03R004	423	121 T	571	3.41 T	2880	423	121 T	571
PCB031	11	11	100	49.2 T	35400 J	03R004	5390	490	7720	49.2 T	35400 J	5390	490	7720
PCB032	11	11	100	11.6 T	10500	03R004	1630	117	2680	11.6 T	10500	1630	117	2680
PCB034	11	11	100	0.283 T	183	03R004	27.5	2.44	42.4	0.283 T	183	27.5	2.44	42.4
PCB035	11	11	100	1.08 T	417	03R004	67.2	5.35	164	1.08 T	417	67.2	5.35	164
PCB036	11	5	45.5	0.412 T	6.28 T	09R002	1.62	0.443	0.568	0.196 UT	6.28 T	1.71	0.568	4.64 U
PCB037	11	11	100	20.9 T	9330	03R004	1650	94.9	3870	20.9 T	9330	1650	94.9	3870
PCB038	11	9	81.8	0.531	17.7	07R006	6.6	1.05 J	16.6	0.201 U	17.7	5.44	0.719	16.6
PCB039	11	11	100	0.404 JT	163	03R004	44.7	2.97	123	0.404 JT	163	44.7	2.97	123
PCB040 & 041 & 071	11	11	100	47.4 JT	19100 J	03R004	5870	284 J	17800 J	47.4 JT	19100 J	5870	284 J	17800 J

Table 4-5. Round 1 Summary Statistics of Chemical Concentrations in River Sediments.

		N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
PCB042	11	11	100	22.6 T	8970	03R004	2870	149	8490	22.6 T	8970	2870	149	8490
PCB043	11	11	100	3.51 T	1720	03R004	458	23.9	1310	3.51 T	1720	458	23.9	1310
PCB044 & 047 & 065	11	11	100	95.1 JT	45900 J	03R005	13400	2320 J	34800 J	95.1 JT	45900 J	13400	2320 J	34800 J
PCB045 & 051	11	11	100	18 JT	7970 J	03R004	2160	884 JT	5440 J	18 JT	7970 J	2160	884 JT	5440 J
PCB046	11	11	100	5.56 T	2850	03R004	699	39.6	1770	5.56 T	2850	699	39.6	1770
PCB048	11	11	100	14.7 T	8570	03R004	1850	96.7	4650	14.7 T	8570	1850	96.7	4650
PCB049 & 069	11	11	100	60.3 JT	28700 J	03R005	7970	710 J	20300 J	60.3 JT	28700 J	7970	710 J	20300 J
PCB050 & 053	11	11	100	16.5 JT	5430 J	03R004	1840	583 J	4820 J	16.5 JT	5430 J	1840	583 J	4820 J
PCB052	11	11	100	134 T	112000 J	03R005	19400	2070	35600 J	134 T	112000 J	19400	2070	35600 J
PCB054	11	11	100	1.24 T	388	06R002	115	77.3	283	1.24 T	388	115	77.3	283
PCB055	11	8	72.7	1.38 T	467	03R004	126	5.51	255	0.496 U	467	93.2	5.51	255
PCB056	11	11	100	30.8 T	16700	02R001	4130	337	12300	30.8 T	16700	4130	337	12300
PCB057	11	10	90.9	1.28	266	03R005	61.2	3.82	134	0.717 UT	266	55.7	3.82	134
PCB058	11	9	81.8	0.99	297	03R005	50.2	7.65	54	0.765 U	297	41.2	5.52 T	54
PCB059 & 062 & 075	11	11	100	8.84 JT	3260 J	03R004	909	115 J	2670 J	8.84 JT	3260 J	909	115 J	2670 J
PCB060	11	11	100	13.3 T	8380	02R001	2060	172	6420	13.3 T	8380	2060	172	6420
PCB061 & 070 & 074 & 076	11	11	100	152 JT	76900 J	03R005	18700	2200 J	55500 J	152 JT	76900 J	18700	2200 J	55500 J
PCB063	11	11	100	2.99 T	1370	02R001	397	40.2	981	2.99 T	1370	397	40.2	981
PCB064	11	11	100	40.7 T	16500	02R001	5160	343	13700	40.7 T	16500	5160	343	13700
PCB066	11	11	100	78.8 T	39000 J	02R001	9830	837	26300	78.8 T	39000 J	9830	837	26300
PCB067	11	11	100	2.46 T	897	03R004	258	22.9	708	2.46 T	897	258	22.9	708
PCB068	11	11	100	0.778 T	280	03R005	51.2	27.8 T	72.6	0.778 T	280	51.2	27.8 T	72.6
PCB072	11	11	100	1.12 T	430	03R005	82.6	23.3 T	162	1.12 T	430	82.6	23.3 T	162
PCB073	11	4	36.4	24.9 T	77.3	06R002	49	45.3	48.4 T	0.598 U	77.3	20.6	12.2 U	48.4 T
PCB077	11	11	100	7.72 T	2860	02R001	676	109	1790	7.72 T	2860	676	109	1790
PCB078	11	1	9.09	8.54 J	8.54 J	07R006	8.54	8.54 J	8.54 J	0.177 UT	16.4 U	2.7	0.464 UT	8.54 J
PCB079	11	11	100	2.33 T	3260	03R005	361	40.4 T	241	2.33 T	3260	361	40.4 T	241
PCB080	11	0	0							0.521 UT	14.6 U	2.95	0.728 U	11.5 U
PCB081	11	11	100	0.274 T	137	02R001	31.8	3.46	87.5	0.274 T	137	31.8	3.46	87.5
PCB082	11	11	100	27.2 T	21800	03R005	3020	403 T	4210	27.2 T	21800	3020	403 T	4210
PCB083 & 099	11	11	100	142 JT	130000 J	03R005	15900	2560 JT	14100 J	142 JT	130000 J	15900	2560 JT	14100 J
PCB084	11	11	100	71.7 T	68600	03R005	8090	927 T	6850	71.7 T	68600	8090	927 T	6850
PCB085 & 116 & 117	11	11	100	41.1 JT	29200 J	03R005	4140	605 J	6170 J	41.1 JT	29200 J	4140	605 J	6170 J
PCB086 & 087 & 097 & 108 & 119 & 125	11	11	100	167 JT	159000 J	03R005	19100	2750 JT	17300 J	167 JT	159000 J	19100	2750 JT	17300 J
PCB088 & 091	11	11	100	43.2 JT	32100 J	03R005	4120	584 J	4350 J	43.2 JT	32100 J	4120	584 J	4350 J
PCB089	11	11	100	2.36 T	1500	03R005	295	32.9	733	2.36 T	1500	295	32.9	733
PCB090 & 101 & 113	11	11	100	312 JT	258000 J	03R005	29400	5540 J	17800 J	312 JT	258000 J	29400	5540 J	17800 J
PCB092	11	11	100	58.9 T	43900	03R005	5100	1020 T	3520	58.9 T	43900	5100	1020 T	3520
PCB093 & 095 & 098 & 100 & 102	11	11	100	305 JT	235000 J	03R005	26600	3770 J	16600 J	305 JT	235000 J	26600	3770 J	16600 J
PCB094	11	11	100	1.52 T	797	03R005	152	77.7	250	1.52 T	797	152	77.7	250
PCB096	11	11	100	1.96 T	1170	03R005	214	54.7	395	1.96 T	1170	214	54.7	395
PCB103	11	11	100	3.27 T	1260	03R005	201	113	173	3.27 T	1260	201	113	173
PCB104	11	10	90.9	0.178 T	43.8	06R002	13.7	5.85	33.3	0.178 T	43.8	12.5	5.85	33.3
PCB105	11	11	100	81.5 T	54500	03R005	7670	1300 T	11300	81.5 T	54500	7670	1300 T	11300
PCB106	11	2	18.2	1.3 T	62.2	07R006	31.8	1.3 T	1.3 T	0.351 U	62.2	7.92	0.658 UT	15.7 U
PCB107 & 124	11	11	100	8.93 JT	7110 J	03R005	884	153 JT	910 J	8.93 JT	7110 J	884	153 JT	910 J
PCB109	11	11	100	14 T	8920	03R005	1230	283 T	1590	14 T	8920	1230	283 T	1590
PCB110 & 115	11	11	100	378 JT	302000 J	03R005	34400	5170 JT	24800 J	378 JT	302000 J	34400	5170 JT	24800 J
PCB111	11	6	54.5	1.67 T	15.6	03R005	7.18	5.46 T	10.8 J	0.329 UT	15.6	4.37	2.32	10.8 J
PCB112	11	1	9.09	34.7 T	34.7 T	06R002	34.7	34.7 T	34.7 T	0.218 UT	34.7 T	5.45	0.568 U	11.1 U

Table 4-5. Round 1 Summary Statistics of Chemical Concentrations in River Sediments.

		N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
PCB114	11	11	100	3.92 T	3000	03R005	478	71.9 T	875	3.92 T	3000	478	71.9 T	875
PCB118	11	11	100	208 T	170000 J	03R005	20800	3930 T	19600 J	208 T	170000 J	20800	3930 T	19600 J
PCB120	11	11	100	0.973 T	185	03R005	32.2	11.5	48.8	0.973 T	185	32.2	11.5	48.8
PCB121	11	6	54.5	0.759	10.3	06R002	6.19	6.12 T	9.9	0.415 UT	11.5 U	5.36	6.12 T	10.3
PCB122	11	11	100	3.05 T	2100	03R005	298	44.5	483	3.05 T	2100	298	44.5	483
PCB123	11	10	90.9	4.16 T	2900	03R005	395	38.8	611	4.16 T	2900	402	54 T	611
PCB126	11	11	100	0.858 T	225	03R005	42.7	23.3	87	0.858 T	225	42.7	23.3	87
PCB127	11	9	81.8	0.581 JT	632	03R005	77.7	8.75 T	20	0.581 JT	632	65.9	8.75 T	21.5 U
PCB128 & 166	11	11	100	83.1 JT	42000 J	03R005	4800	1020 J	2590 J	83.1 JT	42000 J	4800	1020 J	2590 J
PCB129 & 138 & 160 & 163	11	11	100	688 JT	342000 J	03R005	37800	7910 J	15900 J	688 JT	342000 J	37800	7910 J	15900 J
PCB130	11	10	90.9	38.7 T	15700	03R005	1930	218	964	27.8 U	15700	1760	218	964
PCB131	11	11	100	7.21 T	4280	03R005	481	96	239	7.21 T	4280	481	96	239
PCB132	11	11	100	230 T	85600	03R005	9810	2450	4930	230 T	85600	9810	2450	4930
PCB133	11	11	100	10.6 T	2570	03R005	336	138	250 T	10.6 T	2570	336	138	250 T
PCB134 & 143	11	11	100	34.8 JT	13800 J	03R005	1610	392 J	858 J	34.8 JT	13800 J	1610	392 J	858 J
PCB135 & 151 & 154	11	10	90.9	310 JT	60100 J	03R005	8300	2320 J	6000 JT	10.1 U	60100 J	7550	2320 J	6000 JT
PCB136	11	11	100	100 T	28600	03R005	3400	817	1880	100 T	28600	3400	817	1880
PCB137	11	10	90.9	17.4 T	16200	03R005	1880	184	841	17.4 T	16200	1710	184	841
PCB139 & 140	11	11	100	8.38 JT	5040 J	03R005	633	146 J	923 J	8.38 JT	5040 J	633	146 J	923 J
PCB141	11	11	100	151 T	37200	03R005	4760	1620	3110 T	151 T	37200	4760	1620	3110 T
PCB142	11	2	18.2	0.554	928	07R006	464	0.554	0.554	0.368 UT	928	86.3	0.75 U	8.5 U
PCB144	11	11	100	42.3 T	9720	03R005	1230	355	731 T	42.3 T	9720	1230	355	731 T
PCB145	11	9	81.8	1.13	127	03R005	22.7	2.6	52.8	0.354 UT	127	18.9	2.6	52.8
PCB146	11	11	100	132 T	25100	03R005	3270	1260	2490 T	132 T	25100	3270	1260	2490 T
PCB147 & 149	11	11	100	646 JT	212000 J	03R005	24600	5550 J	12600 JT	646 JT	212000 J	24600	5550 J	12600 JT
PCB148	11	11	100	1.16 T	142	03R005	29.7	16.8	51.9 T	1.16 T	142	29.7	16.8	51.9 T
PCB150	11	11	100	0.872 T	246	03R005	38.5	16.2	58.3 T	0.872 T	246	38.5	16.2	58.3 T
PCB152	11	11	100	0.545 T	279	03R005	41.2	19.2	47.6	0.545 T	279	41.2	19.2	47.6
PCB153 & 168	11	11	100	644 JT	208000 J	03R005	24800	6880 J	14500 JT	644 JT	208000 J	24800	6880 J	14500 JT
PCB155	10	7	70	0.263 J	11.9	06R002	3.51	2.97 T	5.45	0.122 UT	11.9	2.76	0.422	5.45
PCB156	11	11	100	43.9 T	16300	03R005	2140	845 T	1580	43.9 T	16300	2140	845 T	1580
PCB157	11	11	100	10.1 T	6800	03R005	753	145 T	401	10.1 T	6800	753	145 T	401
PCB158	11	11	100	66 T	25600	03R005	3030	752	1660	66 T	25600	3030	752	1660
PCB159	11	10	90.9	7.51 T	1010	03R005	181	66.8 T	217 T	0.591 U	1010	165	66.8 T	217 T
PCB161	11	0	0							0.394 UT	18 U	3.46	0.614 U	10.2 U
PCB162	11	10	90.9	1.37 JT	789	03R005	102	24.1	75.9	1.37 JT	789	93	24.1	75.9
PCB164	11	11	100	53.8 T	14700	03R005	1800	579	1130	53.8 T	14700	1800	579	1130
PCB165	11	7	63.6	1.65	27.2	03R005	7.24	2.51 T	11.3 T	0.524 UT	27.2	7.03	2.51 T	19.5 U
PCB167	11	11	100	21.8 T	9110	03R005	1080	321	614	21.8 T	9110	1080	321	614
PCB169	11	9	81.8	0.375 T	13.7	07R006	3.65	1.18	10.5	0.207 UT	13.7	3.03	0.821 J	10.5
PCB170	11	11	100	231 T	28200	03R005	4800	2020	5230 T	231 T	28200	4800	2020	5230 T
PCB171 & 173	11	11	100	79.5 JT	9230 J	03R005	1620	674 J	1990 J	79.5 JT	9230 J	1620	674 J	1990 J
PCB172	11	11	100	43.4 T	4430	03R005	802	357	984 T	43.4 T	4430	802	357	984 T
PCB174	11	11	100	284 T	25000	03R005	4640	2040	6280 T	284 T	25000	4640	2040	6280 T
PCB175	11	11	100	11.4 T	1080	03R005	212	93.7	323	11.4 T	1080	212	93.7	323
PCB176	11	11	100	36.3 T	3110	03R005	599	253	759 T	36.3 T	3110	599	253	759 T
PCB177	11	11	100	154 T	14200	03R005	2580	1140	3630 T	154 T	14200	2580	1140	3630 T
PCB178	11	11	100	52.6 T	4170	03R005	822	371	1300 T	52.6 T	4170	822	371	1300 T
PCB179	11	11	100	113 T	8720	03R005	1680	719	2690 T	113 T	8720	1680	719	2690 T
PCB180 & 193	11	11	100	539 JT	50300 J	03R005	9460	4770 JT	13600 JT	539 JT	50300 J	9460	4770 JT	13600 JT

Table 4-5. Round 1 Summary Statistics of Chemical Concentrations in River Sediments.

		N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
PCB181	11	11	100	1.53 T	7490	07R006	748	23.1	550	1.53 T	7490	748	23.1	550
PCB182	11	11	100	1.27 T	187	03R005	35.1	13.5	88.6	1.27 T	187	35.1	13.5	88.6
PCB183 & 185	11	11	100	188 JT	16200 J	03R005	3280	1310 JT	4270 JT	188 JT	16200 J	3280	1310 JT	4270 JT
PCB184	11	8	72.7	0.747 T	79.2	07R006	13.7	1.57	20.1	0.32 UT	79.2	10.3	1.57	20.1
PCB186	11	6	54.5	0.326 T	290	07R006	50.8	0.427 T	12.8	0.304 U	290	28.1	0.427 T	12.8
PCB187	11	11	100	323 T	22900	03R005	4600	2190 T	7720 T	323 T	22900	4600	2190 T	7720 T
PCB188	11	10	90.9	0.474	31.8	07R006	9.92	3.3 T	29.1	0.322 UT	31.8	9.05	3.3 T	29.1
PCB189	11	11	100	7.84 T	959	03R005	186	95.7	262	7.84 T	959	186	95.7	262
PCB190	11	11	100	45.7 T	5240	03R005	1050	418	1910	45.7 T	5240	1050	418	1910
PCB191	11	11	100	10.1 T	1160	03R005	222	97.6	354	10.1 T	1160	222	97.6	354
PCB192	11	1	9.09	30.6	30.6	07R006	30.6	30.6	30.6	0.245 UT	30.6	3.84	0.288 UT	6.56 U
PCB194	11	11	100	95.7 T	5940	03R005	1660	1470	2930 T	95.7 T	5940	1660	1470	2930 T
PCB195	11	11	100	41.8 T	4210	07R006	1010	507	2440	41.8 T	4210	1010	507	2440
PCB196	11	11	100	64.5 T	3370	03R005	1090	738	2210	64.5 T	3370	1090	738	2210
PCB197 & 200	11	11	100	24.3 JT	2430 J	07R006	504	219 J	1100 J	24.3 JT	2430 J	504	219 J	1100 J
PCB198 & 199	11	11	100	129 JT	7190 J	03R005	2140	1320 J	3390 J	129 JT	7190 J	2140	1320 J	3390 J
PCB201	11	11	100	16.9 T	1030	07R006	316	165	862	16.9 T	1030	316	165	862
PCB202	11	11	100	23.1 T	1420	03R005	371	160 T	700	23.1 T	1420	371	160 T	700
PCB203	11	11	100	81.3 T	5450	07R006	1650	870	4570	81.3 T	5450	1650	870	4570
PCB204	11	6	54.5	0.318 T	364	07R006	61.2	0.411	1.73	0.276 U	364	34.4	0.411	6.36 U
PCB205	11	11	100	5.21 T	698 J	07R006	146	87.8	306	5.21 T	698 J	146	87.8	306
PCB206	11	11	100	45 T	9170	07R006	1430	438	2860	45 T	9170	1430	438	2860
PCB207	11	11	100	5.72 T	4490	07R006	486	66.8	333	5.72 T	4490	486	66.8	333
PCB208	11	11	100	16.3	3550	07R006	500	120	880	16.3	3550	500	120	880
PCB209	11	11	100	42.1 T	17500	07R006	1800	171	865	42.1 T	17500	1800	171	865
VOCs (ug/kg)														
1,1,1,2-Tetrachloroethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
1,1,1-Trichloroethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
1,1,2,2-Tetrachloroethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
1,1,2-Trichloroethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
1,1-Dichloroethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Vinylidene chloride	1	0	0							0.18 UJT	0.18 UJT	0.18	0.18 UJT	0.18 UJT
1,2,3-Trichloropropane	1	0	0							4 UJ	4 UJ	4	4 UJ	4 UJ
1,2-Dichloroethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
1,2-Dichloropropane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Methylethyl ketone	1	0	0							10 UJ	10 UJ	10	10 UJ	10 UJ
2-Chloroethyl vinyl ether	1	0	0							10 UJ	10 UJ	10	10 UJ	10 UJ
Methyl N-butyl ketone	1	0	0							10 UJ	10 UJ	10	10 UJ	10 UJ
Methyl isobutyl ketone	1	0	0							10 UJ	10 UJ	10	10 UJ	10 UJ
Acetone	1	1	100	13 J	13 J	08R001	13	13 J	13 J	13 J	13 J	13	13 J	13 J
Acrolein	1	0	0							100 UJ	100 UJ	100	100 UJ	100 UJ
Acrylonitrile	1	0	0							10 UJ	10 UJ	10	10 UJ	10 UJ
Benzene	1	0	0							0.18 UJT	0.18 UJT	0.18	0.18 UJT	0.18 UJT
Bromochloromethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Bromodichloromethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Bromoethane	1	0	0							4 UJ	4 UJ	4	4 UJ	4 UJ
Bromoform	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Bromomethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Carbon disulfide	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Carbon tetrachloride	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ

Table 4-5. Round 1 Summary Statistics of Chemical Concentrations in River Sediments.

		N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
Chlorobenzene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Chlorodibromomethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Chloroethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Chloroform	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Chloromethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
cis-1,3-Dichloropropene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Methylene bromide	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Dichlorodifluoromethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Ethylbenzene	1	0	0							0.18 UJT	0.18 UJT	0.18	0.18 UJT	0.18 UJT
Methyl iodide	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Isopropylbenzene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
m,p-Xylene	1	0	0							0.37 UJT	0.37 UJT	0.37	0.37 UJT	0.37 UJT
Methylene chloride	1	0	0							4 UJ	4 UJ	4	4 UJ	4 UJ
Methyl tert-butyl ether	1	0	0							0.18 UJ	0.18 UJ	0.18	0.18 UJ	0.18 UJ
o-Xylene	1	0	0							0.18 UJT	0.18 UJT	0.18	0.18 UJT	0.18 UJT
Styrene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Tetrachloroethene	1	0	0							0.18 UJT	0.18 UJT	0.18	0.18 UJT	0.18 UJT
Toluene	1	0	0							0.18 UJT	0.18 UJT	0.18	0.18 UJT	0.18 UJT
trans-1,2-Dichloroethene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
trans-1,3-Dichloropropene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
1,4-Dichloro-trans-2-butene	1	0	0							10 UJ	10 UJ	10	10 UJ	10 UJ
Trichloroethene	1	0	0							0.18 UJT	0.18 UJT	0.18	0.18 UJT	0.18 UJT
Trichlorofluoromethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Vinyl acetate	1	0	0							10 UJ	10 UJ	10	10 UJ	10 UJ
Vinyl chloride	1	0	0							0.18 UJT	0.18 UJT	0.18	0.18 UJT	0.18 UJT
1,1,2-Trichloro-1,2,2-trifluoroethane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
1,1-Dichloropropene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
1,2,3-Trichlorobenzene	1	0	0							10 UJ	10 UJ	10	10 UJ	10 UJ
1,2-Dibromo-3-chloropropane	1	0	0							10 UJ	10 UJ	10	10 UJ	10 UJ
1,3,5-Trimethylbenzene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
1,3-Dichloropropane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
2,2-Dichloropropane	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
2-Chlorotoluene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
4-Chlorotoluene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Bromobenzene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
cis-1,2-Dichloroethene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Ethylene dibromide	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
n-Butylbenzene	1	0	0							4 UJ	4 UJ	4	4 UJ	4 UJ
n-Propylbenzene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
p-Cymene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Pseudocumene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Sec-butylbenzene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
tert-Butylbenzene	1	0	0							2 UJ	2 UJ	2	2 UJ	2 UJ
Dioxins/Furans (pg/g)														
Tetrachlorodibenzo-p-dioxin	11	11	100	1.25 NJ	114 NJ	06R004	24.5	6.73 NJ	46.1 NJ	1.25 NJ	114 NJ	24.5	6.73 NJ	46.1 NJ
Pentachlorodibenzo-p-dioxin	11	10	90.9	0.749 NJ	141 NJ	06R002	42.9	5.33 NJ	124 NJT	0.749 NJ	141 NJ	39.2	5.33 NJ	124 NJT
Hexachlorodibenzo-p-dioxin	11	11	100	14.2 NJ	349 NJT	06R002	128	55.6	330 NJ	14.2 NJ	349 NJT	128	55.6	330 NJ
Heptachlorodibenzo-p-dioxin	11	11	100	100 NJ	1280 NJT	06R002	618	686	1010 NJ	100 NJ	1280 NJT	618	686	1010 NJ
Octachlorodibenzo-p-dioxin	11	11	100	383 NJ	4370 NJ	06R002	2230	2150 NJT	4220 NJ	383 NJ	4370 NJ	2230	2150 NJT	4220 NJ
Tetrachlorodibenzofuran	11	11	100	2.14 NJ	35800	07R006	3390	28.4 NJ	470 NJT	2.14 NJ	35800	3390	28.4 NJ	470 NJT

Table 4-5. Round 1 Summary Statistics of Chemical Concentrations in River Sediments.

				Detected Concentrations						Detected and Nondetected Concentrations				
Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
Pentachlorodibenzofuran	11	11	100	5.76 NJ	64700	07R006	6480	54.6 NJ	2700 NJT	5.76 NJ	64700	6480	54.6 NJ	2700 NJT
Hexachlorodibenzofuran	11	11	100	14.4 NJ	100000	07R006	9490	113 NJ	1640 NJT	14.4 NJ	100000	9490	113 NJ	1640 NJT
Heptachlorodibenzofuran	11	11	100	28.6 NJ	39100	07R006	3780	236 NJ	966 NJ	28.6 NJ	39100	3780	236 NJ	966 NJ
Octachlorodibenzofuran	11	11	100	25.3 NJ	20800	07R006	2060	137 NJT	828 NJ	25.3 NJ	20800	2060	137 NJT	828 NJ
2,3,7,8-Tetrachlorodibenzo-p-dioxin	11	9	81.8	0.202 NJ	5.44 J	07R006	1.28	0.72 NJ	1.46 NJ	0.107 UJ	5.44 J	1.07	0.493 NJ	1.46 NJ
2,3,7,8-TCDD TEQ	11	11	100	2.05 T	16600 T	07R006	1540	20 T	103 T	2.05 T	16600 T	1540	20 T	103 T
1,2,3,7,8-Pentachlorodibenzo-p-dioxin	11	11	100	0.322 NJ	11.1 NJ	06R002	3.95	2.84 NJ	11.1 NJT	0.322 NJ	11.1 NJ	3.95	2.84 NJ	11.1 NJT
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	11	11	100	0.434 NJ	7.59 NJT	06R002	3.43	3.57 J	6.93 NJ	0.434 NJ	7.59 NJT	3.43	3.57 J	6.93 NJ
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	11	11	100	1.8 NJ	46.9 NJT	06R002	18.1	14.6 J	42.9 NJ	1.8 NJ	46.9 NJT	18.1	14.6 J	42.9 NJ
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	11	11	100	1.34 NJ	24 NJT	06R002	10.5	10.5 NJ	22.6 NJT	1.34 NJ	24 NJT	10.5	10.5 NJ	22.6 NJT
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	11	11	100	51 NJ	563 NJT	06R002	286	246	545 NJ	51 NJ	563 NJT	286	246	545 NJ
2,3,7,8-Tetrachlorodibenzofuran	11	11	100	0.304	14000	07R006	1280	3.51 T	21.9	0.304	14000	1280	3.51 T	21.9
1,2,3,7,8-Pentachlorodibenzofuran	11	11	100	0.252 NJ	29400	07R006	2690	3.66 NJ	145 NJ	0.252 NJ	29400	2690	3.66 NJ	145 NJ
2,3,4,7,8-Pentachlorodibenzofuran	11	11	100	0.275 NJ	9360	07R006	862	2.76 NJ	58.8 NJ	0.275 NJ	9360	862	2.76 NJ	58.8 NJ
1,2,3,4,7,8-Hexachlorodibenzofuran	11	11	100	0.902 NJ	66000	07R006	6030	9.57 NJ	239 NJ	0.902 NJ	66000	6030	9.57 NJ	239 NJ
1,2,3,6,7,8-Hexachlorodibenzofuran	11	11	100	0.451 NJ	17800	07R006	1630	3.31 NJ	77 NJ	0.451 NJ	17800	1630	3.31 NJ	77 NJ
1,2,3,7,8,9-Hexachlorodibenzofuran	11	8	72.7	0.101 NJ	906	07R006	114	0.335 NJ	4.3 NJ	0.08 U	906	83	0.183 NJ	4.3 NJ
2,3,4,6,7,8-Hexachlorodibenzofuran	11	11	100	0.32 NJ	2020	07R006	195	3.14 NJ	47.7 NJT	0.32 NJ	2020	195	3.14 NJ	47.7 NJT
1,2,3,4,6,7,8-Heptachlorodibenzofuran	11	11	100	9.78 NJ	24800	07R006	2310	66.7 NJ	209 NJ	9.78 NJ	24800	2310	66.7 NJ	209 NJ
1,2,3,4,7,8,9-Heptachlorodibenzofuran	11	11	100	0.724 NJ	8240	07R006	757	5.1 NJ	34.5 NJ	0.724 NJ	8240	757	5.1 NJ	34.5 NJ

Notes:

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value	T	Result derived or selected from more than one reported value
JT	Combined qualifier	U	Analyte was not detected
N	Analyte tentatively identified	UJ	Combined qualifier
NJ	Combined qualifier	UJT	Combined qualifier
NJT	Combined qualifier	UT	Combined qualifier
NT	Combined qualifier		

Table 4-6. Round 1 Summary Statistics of Chemical Concentrations in Brown Bullhead Tissue.

Species	Tissue Type	Analyte	N	N Detected	% Detected	Detected Concentrations						Detected and Nondetected Concentrations				
						Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
		Conventionals (percent)														
brown bullhead	fillet without skin	Total solids	6	6	100	16.6	18.9	FZ0306	17.8	17.5	18.5	16.6	18.9	17.8	17.5	18.5
brown bullhead	whole-body	Total solids	6	6	100	23.3	25.1	FZ0609	23.9	23.7	24.3	23.3	25.1	23.9	23.7	24.3
brown bullhead	fillet without skin	Lipids	6	6	100	0.93	1.3	FZ0306	1.08	0.97 T	1.2 T	0.93	1.3	1.08	0.97 T	1.2 T
brown bullhead	whole-body	Lipids	6	6	100	1.5 T	3.8	FZ0609	2.43	2.3	2.6	1.5 T	3.8	2.43	2.3	2.6
		Metals (mg/kg)														
brown bullhead	fillet without skin	Aluminum	6	6	100	1.95 J	10.6 J	FZ0609	5.46	3.5 J	8.19 J	1.95 J	10.6 J	5.46	3.5 J	8.19 J
brown bullhead	whole-body	Aluminum	6	6	100	4.2 J	31.7 J	FZ0609	9.8	4.9 J	8 J	4.2 J	31.7 J	9.8	4.9 J	8 J
brown bullhead	fillet without skin	Antimony	6	0	0							0 U	0.001 U	0.000833	0.001 U	0.001 U
brown bullhead	whole-body	Antimony	6	0	0							0.001 U	0.001 U	0.001	0.001 U	0.001 U
brown bullhead	fillet without skin	Arsenic	6	6	100	0.02 J	0.02 J	FZ0609	0.02	0.02 J	0.02 J	0.02 J	0.02 J	0.02	0.02 J	0.02 J
brown bullhead	whole-body	Arsenic	6	6	100	0.04 J	0.08 J	FZ0609	0.0558	0.05 J	0.06 J	0.04 J	0.08 J	0.0558	0.05 J	0.06 J
brown bullhead	fillet without skin	Cadmium	6	5	83.3	0.001 J	0.001 J	FZ0609	0.001	0.001 J	0.001 J	0 U	0.001 J	0.000833	0.001 J	0.001 J
brown bullhead	whole-body	Cadmium	6	6	100	0.008 J	0.014	FZ0306	0.0116	0.012 J	0.014	0.008 J	0.014	0.0116	0.012 J	0.014
brown bullhead	fillet without skin	Chromium	6	3	50	0.05 J	0.23	FZ0306	0.12	0.08 J	0.08 J	0.05 J	0.23	0.0867	0.05 U	0.08 J
brown bullhead	whole-body	Chromium	6	6	100	0.39	1.32	FZ0306	0.73	0.52	1.08	0.39	1.32	0.73	0.52	1.08
brown bullhead	fillet without skin	Copper	6	6	100	0.203	0.292	FZ0306	0.251	0.251	0.256	0.203	0.292	0.251	0.251	0.256
brown bullhead	whole-body	Copper	6	6	100	0.586	0.798	FZ0609	0.69	0.67	0.774 T	0.586	0.798	0.69	0.67	0.774 T
brown bullhead	fillet without skin	Lead	6	0	0							0.002 U	0.008 U	0.00367	0.002 U	0.005 U
brown bullhead	whole-body	Lead	6	5	83.3	0.023	0.0435 T	FZ0609	0.0289	0.026	0.026	0.014 U	0.0435 T	0.0264	0.026	0.026
brown bullhead	fillet without skin	Manganese	6	6	100	0.085	0.177	FZ0609	0.109	0.095	0.107	0.085	0.177	0.109	0.095	0.107
brown bullhead	whole-body	Manganese	6	6	100	3.15	10.8 T	FZ0609	5.09	3.38	5.44	3.15	10.8 T	5.09	3.38	5.44
brown bullhead	fillet without skin	Mercury	6	6	100	0.035	0.094	FZ0609	0.0608	0.057	0.074	0.035	0.094	0.0608	0.057	0.074
brown bullhead	whole-body	Mercury	6	6	100	0.025 T	0.054	FZ0306	0.0367	0.031	0.046	0.025 T	0.054	0.0367	0.031	0.046
brown bullhead	fillet without skin	Nickel	6	6	100	0.003 J	0.055	FZ0306	0.0205	0.009 J	0.029 J	0.003 J	0.055	0.0205	0.009 J	0.029 J
brown bullhead	whole-body	Nickel	6	5	83.3	0.213 J	0.321 J	FZ0306	0.264	0.261 J	0.29 J	0.213 J	0.328 UJT	0.275	0.261 J	0.321 J
brown bullhead	fillet without skin	Selenium	6	0	0							0.2 U	0.2 U	0.2	0.2 U	0.2 U
brown bullhead	whole-body	Selenium	6	2	33.3	0.3 T	0.3	FZ0609	0.3	0.3 T	0.3 T	0.2 U	0.3 U	0.25	0.2 U	0.3
brown bullhead	fillet without skin	Silver	6	0	0							0.0002 U	0.0002 U	0.0002	0.0002 U	0.0002 U
brown bullhead	whole-body	Silver	6	1	16.7	0.00405 T	0.00405 T	FZ0609	0.00405	0.00405 T	0.00405 T	0.0021 U	0.00405 T	0.00256	0.0022 U	0.0027 U
brown bullhead	fillet without skin	Thallium	6	6	100	0.0012 J	0.003 J	FZ0306	0.00208	0.0014 J	0.0029 J	0.0012 J	0.003 J	0.00208	0.0014 J	0.0029 J
brown bullhead	whole-body	Thallium	6	4	66.7	0.002 J	0.0039 J	FZ0306	0.00295	0.0028 J	0.0031 J	0.0018 UT	0.0039 J	0.00257	0.002 J	0.0031 J
brown bullhead	fillet without skin	Zinc	6	6	100	3.96 J	6.49 J	FZ0306	5.23	5.32 J	5.51 J	3.96 J	6.49 J	5.23	5.32 J	5.51 J
brown bullhead	whole-body	Zinc	6	6	100	12.7	15.6	FZ0609	14.1	14.1	14.9	12.7	15.6	14.1	14.1	14.9
		PCB Aroclors (ug/kg)														
brown bullhead	fillet without skin	Aroclor 1016	6	0	0							1.9 U	38 U	13.9	1.9 U	38 U
brown bullhead	whole-body	Aroclor 1016	6	0	0							1.9 U	38 U	11.9	5.3 U	13 U
brown bullhead	fillet without skin	Aroclor 1242	6	0	0							1.9 U	40 UJ	14.3	1.9 U	38 U
brown bullhead	whole-body	Aroclor 1242	6	0	0							1.9 U	38 U	13.1	7.5 U	18 U
brown bullhead	fillet without skin	Aroclor 1248	6	4	66.7	15	24	FZ0609	20	17	24	15	71 UJ	32.2	24	42 U
brown bullhead	whole-body	Aroclor 1248	6	3	50	23	64	FZ0609	41	36	36	23	64	42.2	38 U	49 U
brown bullhead	fillet without skin	Aroclor 1254	6	0	0							26 U	390 UJ	119	33 U	180 U
brown bullhead	whole-body	Aroclor 1254	6	0	0							38 U	160 U	92	75 U	120 U
brown bullhead	fillet without skin	Aroclor 1260	6	6	100	22	1300 J	FZ0609	341	36	560	22	1300 J	341	36	560
brown bullhead	whole body	Aroclor 1260	6	6	100	44	1700	FZ0609	384	90	250 J	44	1700	384	90	250 J
brown bullhead	fillet without skin	Aroclor 1262	6	0	0							1.9 U	38 U	13.9	1.9 U	38 UJ
brown bullhead	whole-body	Aroclor 1262	6	0	0							1.9 U	38 U	10.8	3.8 U	9.5 U
brown bullhead	fillet without skin	Aroclor 1268	6	0	0							1.9 U	38 U	13.9	1.9 U	38 UJ
brown bullhead	whole-body	Aroclor 1268	6	0	0							1.9 U	38 U	10.8	3.8 U	9.5 U
brown bullhead	fillet without skin	Aroclor 1221	6	0	0							1.9 U	140 U	33.6	1.9 U	54 U

Table 4-6. Round 1 Summary Statistics of Chemical Concentrations in Brown Bullhead Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
brown bullhead	whole-body	Aroclor 1221	6	0	0							1.9 U	38 U	14.4	3.8 U	31 U
brown bullhead	fillet without skin	Aroclor 1232	6	0	0							1.9 U	70 U	19.3	1.9 U	38 U
brown bullhead	whole-body	Aroclor 1232	6	0	0							1.9 U	38 U	13.2	8.8 U	17 U
brown bullhead	fillet without skin	Total PCB Aroclors	6	6	100	37 T	1300 JT	FZ0609	354	56 T	560 T	37 T	1300 JT	354	56 T	560 T
brown bullhead	whole-body	Total PCB Aroclors	6	6	100	67 T	1700 T	FZ0609	404	125 T	314 JT	67 T	1700 T	404	125 T	314 JT
		Organochlorine Pesticides (ug/kg)														
brown bullhead	fillet without skin	2,4'-DDD	6	2	33.3	1.1 NJ	1.4 NJ	FZ0609	1.25	1.1 NJ	1.1 NJ	1 U	8.6 UT	3.62	1.1 NJ	8.6 UT
brown bullhead	whole-body	2,4'-DDD	6	1	16.7	12 NJ	12 NJ	FZ0609	12	12 NJ	12 NJ	1.6 U	12 NJ	4.95	2.2 U	8.6 UT
brown bullhead	fillet without skin	2,4'-DDE	6	0	0							1 UJ	7.5 UT	2.58	1 U	4 UT
brown bullhead	whole-body	2,4'-DDE	6	0	0							1 UJ	7.5 UT	2.73	1.3 UJ	4 U
brown bullhead	fillet without skin	2,4'-DDT	6	4	66.7	1.7 N	3.1 NJ	FZ0609	2.48	2.5 J	2.6 N	1.7 N	6.9 UT	3.6	2.6 N	4.8 UT
brown bullhead	whole-body	2,4'-DDT	6	5	83.3	3.3 N	14 N	FZ0306	9.1	8.1 NJ	12 NJ	3.3 N	14 N	8.73	8.1 NJ	12 NJ
brown bullhead	fillet without skin	4,4'-DDD	6	4	66.7	1.4 N	3.8 J	FZ0306	2.5	2.1 J	2.7 J	1.4 N	6.1 UT	3.7	2.7 J	6.1 UT
brown bullhead	whole-body	4,4'-DDD	6	6	100	6.9 J	13	FZ0609	9.38	8 JT	12	6.9 J	13	9.38	8 JT	12
brown bullhead	fillet without skin	4,4'-DDE	6	6	100	6.6 J	26.5 JT	FZ0609	13.5	11	15 J	6.6 J	26.5 JT	13.5	11	15 J
brown bullhead	whole-body	4,4'-DDE	6	6	100	29.5 JT	70	FZ0306	47.4	42 J	58	29.5 JT	70	47.4	42 J	58
brown bullhead	fillet without skin	4,4'-DDT	6	4	66.7	3.9 J	8.4 J	FZ0609	5.5	4.6 J	5.1 J	3.9 J	8.4 J	5.77	5.1 J	6.3 UT
brown bullhead	whole-body	4,4'-DDT	6	5	83.3	5.3 J	46	FZ0609	23.1	24	25	5.3 J	46	20.3	15 N	25
brown bullhead	fillet without skin	Total of 3 isomers: pp-DDT,-DDD,-DDE	6	6	100	12 JT	26.5 JT	FZ0609	18.8	16.5 JT	23.4 JT	12 JT	26.5 JT	18.8	16.5 JT	23.4 JT
brown bullhead	whole-body	Total of 3 isomers: pp-DDT,-DDD,-DDE	6	6	100	37.5 JT	117 T	FZ0609	76	73.4 JT	94 JT	37.5 JT	117 T	76	73.4 JT	94 JT
brown bullhead	fillet without skin	Aldrin	6	0	0							1 U	13 UT	3.5	1 U	4 UT
brown bullhead	whole-body	Aldrin	6	0	0							1 U	13 UT	3.5	1 U	4 U
brown bullhead	fillet without skin	alpha-Hexachlorocyclohexane	6	0	0							1 U	6.4 UT	2.4	1 U	4 UT
brown bullhead	whole-body	alpha-Hexachlorocyclohexane	6	0	0							1 U	6.4 UT	2.4	1 U	4 U
brown bullhead	fillet without skin	beta-Hexachlorocyclohexane	6	0	0							1 UJ	8.5 UT	2.82	1 UJ	4 UT
brown bullhead	whole body	beta Hexachlorocyclohexane	6	0	0							1 UJ	8.5 UT	3.8	2.3 UJ	6.8 U
brown bullhead	fillet without skin	delta-Hexachlorocyclohexane	6	0	0							1 U	7.3 UT	2.55	1 U	4 UT
brown bullhead	whole-body	delta-Hexachlorocyclohexane	6	0	0							1 U	7.3 UT	2.55	1 U	4 U
brown bullhead	fillet without skin	gamma-Hexachlorocyclohexane	6	0	0							1 U	9.6 UT	2.93	1 U	4 UT
brown bullhead	whole-body	gamma-Hexachlorocyclohexane	6	3	50	1.4 N	1.9 N	FZ0609	1.6	1.5 N	1.5 N	1 U	9.6 UT	3.23	1.5 N	4 U
brown bullhead	fillet without skin	cis-Chlordane	6	0	0							1 U	20 U	4.67	1 U	4 U
brown bullhead	whole-body	cis-Chlordane	6	2	33.3	1.7 NJ	27	FZ0306	14.4	1.7 NJ	1.7 NJ	1 U	27	9.17	1.7 NJ	20 U
brown bullhead	fillet without skin	trans-Chlordane	6	0	0							1 U	8.4 UT	2.73	1 U	4 UT
brown bullhead	whole-body	trans-Chlordane	6	1	16.7	25	25	FZ0306	25	25	25	1 U	25	6.73	1 U	8.4 UT
brown bullhead	fillet without skin	Oxychlordane	6	0	0							1 U	20 UT	4.67	1 U	4 UT
brown bullhead	whole-body	Oxychlordane	6	0	0							1 U	20 UT	4.67	1 U	4 UJ
brown bullhead	fillet without skin	cis-Nonachlor	6	0	0							1.1 U	7.1 UT	2.88	1.6 U	4 UT
brown bullhead	whole-body	cis-Nonachlor	6	0	0							3 UJ	11 UJ	7.35	7.1 UT	8.8 UJ
brown bullhead	fillet without skin	trans-Nonachlor	6	4	66.7	1.2 NJ	1.6 NJ	FZ0609	1.43	1.3 N	1.6 NJ	1.2 NJ	11 UT	3.45	1.6 NJ	4 UT
brown bullhead	whole-body	trans-Nonachlor	6	4	66.7	1.8 NJ	15	FZ0306	6.53	3.7 NJ	5.6 NJ	1.8 NJ	15	6.85	4 UJ	11 UT
brown bullhead	fillet without skin	Dieldrin	6	1	16.7	2.1 NJ	2.1 NJ	FZ0306	2.1	2.1 NJ	2.1 NJ	1 U	14 UT	3.85	1 U	4 UT
brown bullhead	whole-body	Dieldrin	6	2	33.3	1.2 NJ	2.6 NJ	FZ0306	1.9	1.2 NJ	1.2 NJ	1.2 NJ	14 UT	4.33	2.1 U	4 U
brown bullhead	fillet without skin	alpha-Endosulfan	6	0	0							1 U	20 U	4.67	1 U	4 U
brown bullhead	whole-body	alpha-Endosulfan	6	0	0							1 U	20 U	4.67	1 U	4 U
brown bullhead	fillet without skin	beta-Endosulfan	6	0	0							1 U	15 UT	3.83	1 U	4 UT
brown bullhead	whole-body	beta-Endosulfan	6	2	33.3	2.3 NJ	8.6 NJ	FZ0306	5.45	2.3 NJ	2.3 NJ	1 U	15 UT	5.98	4 U	8.6 NJ
brown bullhead	fillet without skin	Endosulfan sulfate	6	0	0							1 U	12 UT	3.33	1 U	4 UT
brown bullhead	whole-body	Endosulfan sulfate	6	0	0							1 U	12 UT	3.33	1 U	4 U
brown bullhead	fillet without skin	Endrin	6	0	0							1 U	20 UT	4.67	1 U	4 UT
brown bullhead	whole-body	Endrin	6	0	0							1 U	20 UT	4.7	1 U	4 U

Table 4-6. Round 1 Summary Statistics of Chemical Concentrations in Brown Bullhead Tissue.

Species	Tissue Type	Analyte	N	N Detected	% Detected	Detected Concentrations Minimum	Maximum	Location	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th UCL
brown bullhead	fillet without skin	Endrin aldehyde	6	0	0							1 UJ	8.5 UT	2.75	1 UJ	4 UT
brown bullhead	whole-body	Endrin aldehyde	6	0	0							1 UJ	8.5 UT	3.33	1.7 UJ	4 U
brown bullhead	fillet without skin	Endrin ketone	6	0	0							1 U	7.5 UT	2.58	1 U	4 UT
brown bullhead	whole-body	Endrin ketone	6	0	0							1 UJ	7.5 UT	2.58	1 UJ	4 U
brown bullhead	fillet without skin	Heptachlor	6	0	0							1 U	13 UT	3.5	1 U	4 UT
brown bullhead	whole-body	Heptachlor	6	0	0							1 U	13 UT	3.5	1 U	4 U
brown bullhead	fillet without skin	Heptachlor epoxide	6	0	0							1 U	8 UT	2.67	1 U	4 UT
brown bullhead	whole-body	Heptachlor epoxide	6	0	0							1 U	8 UT	2.67	1 U	4 U
brown bullhead	fillet without skin	Methoxychlor	6	0	0							1 UJ	4.8 UT	2.13	1 U	4 UT
brown bullhead	whole-body	Methoxychlor	6	1	16.7	1.1 NJ	1.1 NJ	FZ0306	1.1	1.1 NJ	1.1 NJ	1 UJ	4.8 UT	2.17	1.1 NJ	4 U
brown bullhead	fillet without skin	Mirex	6	0	0							1 U	6.2 UT	2.37	1 U	4 UT
brown bullhead	whole-body	Mirex	6	0	0							1 U	6.2 UT	2.37	1 U	4 UJ
brown bullhead	fillet without skin	Toxaphene	6	0	0							110 U	4700 U	1030	160 UJ	900 U
brown bullhead	whole-body	Toxaphene	6	0	0							120 U	5700 U	1220	170 U	960 UJ
		Semivolatile Organic Compounds (ug/kg)														
brown bullhead	fillet without skin	1,2,4-Trichlorobenzene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	1,2,4-Trichlorobenzene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	1,2-Dichlorobenzene	6	0	0							33 UT	96 UT	43.5	33 UT	33 UT
brown bullhead	whole-body	1,2-Dichlorobenzene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	1,2-Diphenylhydrazine	6	0	0							33 U	33 U	33	33 U	33 U
brown bullhead	whole-body	1,2-Diphenylhydrazine	6	0	0							33 U	33 U	33	33 U	33 U
brown bullhead	fillet without skin	1,3-Dichlorobenzene	6	0	0							33 UT	66 UT	38.5	33 UT	33 UT
brown bullhead	whole-body	1,3-Dichlorobenzene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	1,4-Dichlorobenzene	6	0	0							33 UT	66 UT	38.5	33 UT	33 UT
brown bullhead	whole-body	1,4-Dichlorobenzene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Azobenzene	6	0	0							170 U	170 U	170	170 U	170 U
brown bullhead	whole-body	Azobenzene	6	0	0							160 U	170 U	167	170 U	170 U
brown bullhead	fillet without skin	Bis(2-chloro-1-methylethyl) ether	6	0	0							170 U	170 U	170	170 U	170 U
brown bullhead	whole-body	Bis(2-chloro-1-methylethyl) ether	6	0	0							160 U	170 U	167	170 U	170 U
brown bullhead	fillet without skin	2,4-Dinitrotoluene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	2,4-Dinitrotoluene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	2,6-Dinitrotoluene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	2,6-Dinitrotoluene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	2-Chloronaphthalene	6	0	0							33 UT	66 UT	38.5	33 UT	33 UT
brown bullhead	whole-body	2-Chloronaphthalene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	2-Nitroaniline	6	0	0							830 U	830 U	830	830 U	830 U
brown bullhead	whole-body	2-Nitroaniline	6	0	0							820 U	830 U	827	830 U	830 U
brown bullhead	fillet without skin	3,3'-Dichlorobenzidine	6	0	0							1700 U	1700 U	1700	1700 U	1700 U
brown bullhead	whole-body	3,3'-Dichlorobenzidine	6	0	0							1600 U	1700 U	1670	1700 U	1700 U
brown bullhead	fillet without skin	3-Nitroaniline	6	0	0							830 U	830 U	830	830 U	830 U
brown bullhead	whole-body	3-Nitroaniline	6	0	0							820 U	830 U	827	830 U	830 U
brown bullhead	fillet without skin	4-Bromophenyl phenyl ether	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	4-Bromophenyl phenyl ether	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	4-Chloroaniline	6	0	0							170 UJT	170 UJT	170	170 UJT	170 UJT
brown bullhead	whole-body	4-Chloroaniline	6	0	0							160 UJT	170 UJT	167	170 UJT	170 UJT
brown bullhead	fillet without skin	4-Chlorophenyl phenyl ether	6	0	0							83 UT	83 UT	83	83 UT	83 UT
brown bullhead	whole-body	4-Chlorophenyl phenyl ether	6	0	0							82 UT	83 UT	82.7	83 UT	83 UT
brown bullhead	fillet without skin	4-Nitroaniline	6	0	0							830 U	830 U	830	830 U	830 U
brown bullhead	whole-body	4-Nitroaniline	6	0	0							820 U	830 U	827	830 U	830 U
brown bullhead	fillet without skin	Aniline	6	0	0							1700 U	1700 U	1700	1700 U	1700 U

Table 4-6. Round 1 Summary Statistics of Chemical Concentrations in Brown Bullhead Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
brown bullhead	whole-body	Aniline	6	0	0							1600 U	1700 U	1670	1700 U	1700 U
brown bullhead	fillet without skin	Benzoic acid	6	0	0							8300 UJ	8300 UJ	8300	8300 UJ	8300 UJ
brown bullhead	whole-body	Benzoic acid	6	0	0							8200 UJ	8300 UJ	8270	8300 UJ	8300 UJ
brown bullhead	fillet without skin	Benzyl alcohol	6	0	0							330 U	330 U	330	330 U	330 U
brown bullhead	whole-body	Benzyl alcohol	6	0	0							330 U	330 U	330	330 U	330 U
brown bullhead	fillet without skin	Bis(2-chloroethoxy) methane	6	0	0							170 U	170 U	170	170 U	170 U
brown bullhead	whole-body	Bis(2-chloroethoxy) methane	6	0	0							160 U	170 U	167	170 U	170 U
brown bullhead	fillet without skin	Bis(2-chloroethyl) ether	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	Bis(2-chloroethyl) ether	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Carbazole	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	Carbazole	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Dibenzofuran	6	0	0							33 UT	80 UT	47	33 UT	70 UT
brown bullhead	whole-body	Dibenzofuran	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Hexachlorobenzene	6	0	0							1 UT	6.4 UT	2.4	1 UT	4 UT
brown bullhead	whole-body	Hexachlorobenzene	6	0	0							1 UT	33 UT	18.4	6.4 UT	33 UT
brown bullhead	fillet without skin	Hexachlorobutadiene	6	0	0							1 UJT	4.6 UT	2.1	1 UJT	4 UJT
brown bullhead	whole-body	Hexachlorobutadiene	6	0	0							1 UJT	4.6 UT	2.1	1 UJT	4 UT
brown bullhead	fillet without skin	Hexachlorocyclopentadiene	6	0	0							830 U	830 U	830	830 U	830 U
brown bullhead	whole-body	Hexachlorocyclopentadiene	6	0	0							820 U	830 U	827	830 U	830 U
brown bullhead	fillet without skin	Hexachloroethane	6	0	0							1 UJT	13 UT	3.5	1 UJT	4 UJT
brown bullhead	whole-body	Hexachloroethane	6	0	0							1 UJT	33 UT	8.83	1 UJT	13 UT
brown bullhead	fillet without skin	Isophorone	6	0	0							1700 U	1700 U	1700	1700 U	1700 U
brown bullhead	whole-body	Isophorone	6	0	0							1600 U	1700 U	1630	1600 U	1700 U
brown bullhead	fillet without skin	Nitrobenzene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	Nitrobenzene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	N-Nitrosodimethylamine	6	0	0							170 UT	170 UT	170	170 UT	170 UT
brown bullhead	whole-body	N-Nitrosodimethylamine	6	0	0							160 UT	170 UT	167	170 UT	170 UT
brown bullhead	fillet without skin	N-Nitrosodipropylamine	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	N-Nitrosodipropylamine	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	N-Nitrosodiphenylamine	6	0	0							170 U	170 U	170	170 U	170 U
brown bullhead	whole-body	N-Nitrosodiphenylamine	6	0	0							160 U	170 U	167	170 U	170 U
		Phenols (ug/kg)														
brown bullhead	fillet without skin	2,4,5-Trichlorophenol	6	0	0							830 U	830 U	830	830 U	830 U
brown bullhead	whole-body	2,4,5-Trichlorophenol	6	0	0							820 U	830 U	827	830 U	830 U
brown bullhead	fillet without skin	2,4,6-Trichlorophenol	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	2,4,6-Trichlorophenol	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	2,4-Dichlorophenol	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	2,4-Dichlorophenol	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	2,4-Dimethylphenol	6	0	0							500 U	500 U	500	500 U	500 U
brown bullhead	whole-body	2,4-Dimethylphenol	6	0	0							490 U	500 U	497	500 U	500 U
brown bullhead	fillet without skin	2-Chlorophenol	6	0	0							33 UT	57 UT	47	50 UT	56 UT
brown bullhead	whole-body	2-Chlorophenol	6	0	0							33 UT	56 UT	36.8	33 UT	33 UT
brown bullhead	fillet without skin	2-Methylphenol	6	0	0							170 U	170 U	170	170 U	170 U
brown bullhead	whole-body	2-Methylphenol	6	0	0							160 U	170 U	167	170 U	170 U
brown bullhead	fillet without skin	2-Nitrophenol	6	0	0							1700 U	1700 U	1700	1700 U	1700 U
brown bullhead	whole-body	2-Nitrophenol	6	0	0							1600 U	1700 U	1630	1600 U	1700 U
brown bullhead	fillet without skin	4,6-Dinitro-2-methylphenol	6	0	0							3300 U	3300 U	3300	3300 U	3300 U
brown bullhead	whole-body	4,6-Dinitro-2-methylphenol	6	0	0							3300 U	3300 U	3300	3300 U	3300 U
brown bullhead	fillet without skin	4-Chloro-3-methylphenol	6	0	0							330 U	330 U	330	330 U	330 U
brown bullhead	whole-body	4-Chloro-3-methylphenol	6	0	0							330 U	330 U	330	330 U	330 U

Table 4-6. Round 1 Summary Statistics of Chemical Concentrations in Brown Bullhead Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
brown bullhead	fillet without skin	4-Methylphenol	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	4-Methylphenol	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	4-Nitrophenol	6	0	0							1700 U	1700 U	1700	1700 U	1700 U
brown bullhead	whole-body	4-Nitrophenol	6	0	0							1600 U	1700 U	1670	1700 U	1700 U
brown bullhead	fillet without skin	Pentachlorophenol	6	0	0							170 UT	190 UT	173	170 UT	170 UT
brown bullhead	whole-body	Pentachlorophenol	6	0	0							160 UT	190 UT	173	170 UT	180 UT
brown bullhead	fillet without skin	Phenol	6	0	0							330 U	330 U	330	330 U	330 U
brown bullhead	whole-body	Phenol	6	0	0							330 U	330 U	330	330 U	330 U
brown bullhead	fillet without skin	2,3,4,5-Tetrachlorophenol	6	0	0							1700 U	1700 U	1700	1700 U	1700 U
brown bullhead	whole-body	2,3,4,5-Tetrachlorophenol	6	0	0							1600 U	1700 U	1670	1700 U	1700 U
brown bullhead	fillet without skin	2,3,5,6-Tetrachlorophenol	6	0	0							1700 U	1700 U	1700	1700 U	1700 U
brown bullhead	whole-body	2,3,5,6-Tetrachlorophenol	6	0	0							1600 UJ	1700 U	1670	1700 U	1700 U
		Phthalates (ug/kg)														
brown bullhead	fillet without skin	Dimethyl phthalate	6	0	0							170 U	170 U	170	170 U	170 U
brown bullhead	whole-body	Dimethyl phthalate	6	0	0							160 U	170 U	167	170 U	170 U
brown bullhead	fillet without skin	Diethyl phthalate	6	0	0							170 U	170 U	170	170 U	170 U
brown bullhead	whole-body	Diethyl phthalate	6	0	0							160 U	170 U	167	170 U	170 U
brown bullhead	fillet without skin	Dibutyl phthalate	6	0	0							330 U	330 U	330	330 U	330 U
brown bullhead	whole-body	Dibutyl phthalate	6	0	0							330 U	330 U	330	330 U	330 U
brown bullhead	fillet without skin	Butylbenzyl phthalate	6	0	0							330 U	330 U	330	330 U	330 U
brown bullhead	whole-body	Butylbenzyl phthalate	6	0	0							330 U	330 U	330	330 U	330 U
brown bullhead	fillet without skin	Di-n-octyl phthalate	6	0	0							330 U	330 U	330	330 U	330 U
brown bullhead	whole-body	Di-n-octyl phthalate	6	0	0							330 U	330 U	330	330 U	330 U
brown bullhead	fillet without skin	Bis(2-ethylhexyl) phthalate	6	1	16.7	100 T	100 T	FZ0306	100	100 T	100 T	100 T	220 UT	120	100 UT	100 UT
brown bullhead	whole-body	Bis(2-ethylhexyl) phthalate	6	1	16.7	2700 T	2700 T	FZ0306	2700	2700 T	2700 T	98 UT	2700 T	533	99 UT	100 UT
		PAHs (ug/kg)														
brown bullhead	fillet without skin	2-Methylnaphthalene	6	0	0							33 UT	70 UT	39.2	33 UT	33 UT
brown bullhead	whole-body	2-Methylnaphthalene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Acenaphthene	6	0	0							33 UT	97 UT	52	33 UT	83 UT
brown bullhead	whole-body	Acenaphthene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Acenaphthylene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	Acenaphthylene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Anthracene	6	0	0							33 UT	93 UT	60.8	33 UT	90 UT
brown bullhead	whole-body	Anthracene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Fluorene	6	0	0							33 UT	87 UT	48.7	33 UT	73 UT
brown bullhead	whole-body	Fluorene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Naphthalene	6	0	0							33 UT	73 UT	51.3	33 UT	70 UT
brown bullhead	whole-body	Naphthalene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Phenanthrene	6	2	33.3	110 JT	140 T	FZ0306	125	110 JT	110 JT	33 UT	140 T	74.2	33 UT	110 JT
brown bullhead	whole-body	Phenanthrene	6	1	16.7	60 T	60 T	FZ0306	60	60 T	60 T	33 UT	60 T	37.5	33 UT	33 UT
brown bullhead	fillet without skin	Low Molecular Weight PAH	6	2	33.3	110 JT	140 T	FZ0306	125	110 JT	110 JT	33 UT	140 T	79.7	66 UT	110 JT
brown bullhead	whole-body	Low Molecular Weight PAH	6	1	16.7	60 T	60 T	FZ0306	60	60 T	60 T	33 UT	60 T	37.5	33 UT	33 UT
brown bullhead	fillet without skin	Dibenz(a,h)anthracene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	Dibenz(a,h)anthracene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Benz(a)anthracene	6	0	0							33 UT	76 UT	40.2	33 UT	33 UT
brown bullhead	whole-body	Benz(a)anthracene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Benzo(a)pyrene	6	0	0							33 UT	80 UT	48.2	33 UT	77 UT
brown bullhead	whole-body	Benzo(a)pyrene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Benzo(b)fluoranthene	6	0	0							33 UT	63 UT	38	33 UT	33 UT
brown bullhead	whole-body	Benzo(b)fluoranthene	6	0	0							33 UT	33 UT	33	33 UT	33 UT

Table 4-6. Round 1 Summary Statistics of Chemical Concentrations in Brown Bullhead Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
brown bullhead	fillet without skin	Benzo(g,h,i)perylene	6	0	0							33 UJT	33 UJT	33	33 UJT	33 UJT
brown bullhead	whole-body	Benzo(g,h,i)perylene	6	0	0							33 UJT	33 UJT	33	33 UJT	33 UJT
brown bullhead	fillet without skin	Benzo(k)fluoranthene	6	0	0							33 UT	73 UT	39.7	33 UT	33 UT
brown bullhead	whole-body	Benzo(k)fluoranthene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Chrysene	6	0	0							33 UT	80 UT	40.8	33 UT	33 UT
brown bullhead	whole-body	Chrysene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Fluoranthene	6	1	16.7	110 T	110 T	FZ0306	110	110 T	110 T	33 UT	110 T	69.2	33 UT	110 UT
brown bullhead	whole-body	Fluoranthene	6	1	16.7	40 T	40 T	FZ0306	40	40 T	40 T	33 UT	40 T	34.2	33 UT	33 UT
brown bullhead	fillet without skin	Indeno(1,2,3-cd)pyrene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	whole-body	Indeno(1,2,3-cd)pyrene	6	0	0							33 UT	33 UT	33	33 UT	33 UT
brown bullhead	fillet without skin	Pyrene	6	0	0							33 UT	60 UT	44.2	33 UT	56 UT
brown bullhead	whole-body	Pyrene	6	0	0							33 UT	49 UT	37.8	33 UT	46 UT
brown bullhead	fillet without skin	High Molecular Weight PAH	6	1	16.7	110 T	110 T	FZ0306	110	110 T	110 T	33 UT	110 T	69.2	33 UT	110 UT
brown bullhead	whole-body	High Molecular Weight PAH	6	1	16.7	40 T	40 T	FZ0306	40	40 T	40 T	33 UT	49 UT	39	33 UT	46 UT
brown bullhead	fillet without skin	Polycyclic Aromatic Hydrocarbons	6	2	33.3	110 JT	250 T	FZ0306	180	110 JT	110 JT	33 UT	250 T	98	66 UT	110 JT
brown bullhead	whole-body	Polycyclic Aromatic Hydrocarbons	6	1	16.7	100 T	100 T	FZ0306	100	100 T	100 T	33 UT	100 T	49	33 UT	49 UT
		PCB Congeners (pg/g)														
brown bullhead	whole-body	PCB001	2	2	100	2.52 J	3.99	FZ0609	3.26	2.52 J	2.52 J	2.52 J	3.99	3.26	2.52 J	2.52 J
brown bullhead	whole-body	PCB002	2	0	0							1.74 UJ	1.75 UJ	1.75	1.74 UJ	1.74 UJ
brown bullhead	whole-body	PCB003	2	1	50	2.7 J	2.7 J	FZ0609	2.7	2.7 J	2.7 J	2.51 U	2.7 J	2.61	2.51 U	2.51 U
brown bullhead	whole-body	PCB004	6	6	100	50.1	165	FZ0306	92.2	77.6 J	102	50.1	165	92.2	77.6 J	102
brown bullhead	whole-body	PCB005	6	0	0							2.26 U	3.9 U	2.7	2.4 UJ	2.85 UJ
brown bullhead	whole-body	PCB006	6	6	100	12.5 J	49.3	FZ0306	25.7	21	31.2	12.5 J	49.3	25.7	21	31.2
brown bullhead	whole-body	PCB007	6	0	0							3.59 U	3.81 UJ	3.74	3.79 U	3.81 U
brown bullhead	whole-body	PCB008	6	6	100	49.5 J	294	FZ0306	119	91	126	49.5 J	294	119	91	126
brown bullhead	whole-body	PCB009	6	6	100	4.96 J	13.6	FZ0609	9.74	7.96	12.9	4.96 J	13.6	9.74	7.96	12.9
brown bullhead	whole-body	PCB010	6	2	33.3	4.63	5.24	FZ0609	4.94	4.63	4.63	4.63	5.24	4.87	4.84 UJ	4.85 UJ
brown bullhead	whole-body	PCB011	6	6	100	28.9 J	52.3 J	FZ0306	37.4	34.5	39.8	28.9 J	52.3 J	37.4	34.5	39.8
brown bullhead	whole-body	PCB012 & 013	6	0	0							5.06 U	5.37 UJ	5.27	5.34 U	5.37 U
brown bullhead	whole-body	PCB014	6	0	0							2.97 U	3.56 U	3.16	3.15 UJ	3.15 UJ
brown bullhead	whole-body	PCB015	6	6	100	4.26	48.5	FZ0306	14.2	7.54	10.5	4.26	48.5	14.2	7.54	10.5
brown bullhead	whole-body	PCB016	6	6	100	88.6	321	FZ0306	186	151	256	88.6	321	186	151	256
brown bullhead	whole-body	PCB017	6	6	100	155	447	FZ0306	281	213	391	155	447	281	213	391
brown bullhead	whole-body	PCB018 & 030	6	6	100	223 J	792 J	FZ0306	519	491 J	709 J	223 J	792 J	519	491 J	709 J
brown bullhead	whole-body	PCB019	6	6	100	52.7	120	FZ0306	82.9	69	105	52.7	120	82.9	69	105
brown bullhead	whole-body	PCB020 & 028	6	6	100	1060 J	4120 J	FZ0609	2400	2310 J	2490 J	1060 J	4120 J	2400	2310 J	2490 J
brown bullhead	whole-body	PCB021 & 033	6	6	100	79.4 J	454 J	FZ0306	221	182 J	292 J	79.4 J	454 J	221	182 J	292 J
brown bullhead	whole-body	PCB022	6	6	100	213	969	FZ0609	507	449	512	213	969	507	449	512
brown bullhead	whole-body	PCB023	6	0	0							3.68 U	3.9 U	3.83	3.88 U	3.9 U
brown bullhead	whole-body	PCB024	6	5	83.3	10.5	16.5	FZ0609	12.7	11.6	13.6	5.04 U	16.5	11.4	11.3	13.6
brown bullhead	whole-body	PCB025	6	6	100	18	79.7	FZ0306	42.5	37.5	53.5	18	79.7	42.5	37.5	53.5
brown bullhead	whole-body	PCB026 & 029	6	6	100	85.9 J	383 J	FZ0609	218	207 J	253 J	85.9 J	383 J	218	207 J	253 J
brown bullhead	whole-body	PCB027	6	6	100	40.1	95.4	FZ0609	71.1	66.5	90.9	40.1	95.4	71.1	66.5	90.9
brown bullhead	whole-body	PCB031	6	6	100	275	981	FZ0306	634	633	913	275	981	634	633	913
brown bullhead	whole-body	PCB032	6	6	100	122	407	FZ0609	263	228	337	122	407	263	228	337
brown bullhead	whole-body	PCB034	6	6	100	4.58	20.4	FZ0609	10.2	8.69	11.3	4.58	20.4	10.2	8.69	11.3
brown bullhead	whole-body	PCB035	6	3	50	3.29	5.85	FZ0609	4.33	3.84	3.84	2.35 U	5.85	3.48	3.2 U	3.84
brown bullhead	whole-body	PCB036	6	2	33.3	63.9	109	FZ0609	86.5	63.9	63.9	3.93 U	109	31.4	3.95 U	63.9
brown bullhead	whole-body	PCB037	6	6	100	18.9	95.5	FZ0306	39.4	26.5	42.2	18.9	95.5	39.4	26.5	42.2
brown bullhead	whole-body	PCB038	6	0	0							2.77 U	2.94 U	2.88	2.92 U	2.94 U

Table 4-6. Round 1 Summary Statistics of Chemical Concentrations in Brown Bullhead Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
brown bullhead	whole-body	PCB039	6	6	100	4.43	14.7	FZ0609	7.49	6.18	7.58	4.43	14.7	7.49	6.18	7.58
brown bullhead	whole-body	PCB040 & 041 & 071	6	6	100	447 J	1640 J	FZ0609	936	822 J	1100 J	447 J	1640 J	936	822 J	1100 J
brown bullhead	whole-body	PCB042	6	6	100	230	854	FZ0609	476	405	496	230	854	476	405	496
brown bullhead	whole-body	PCB043	6	6	100	44.5	234	FZ0609	119	110	116	44.5	234	119	110	116
brown bullhead	whole-body	PCB044 & 047 & 065	6	6	100	1650 J	7940 J	FZ0609	4440	3540 J	6660 J	1650 J	7940 J	4440	3540 J	6660 J
brown bullhead	whole-body	PCB045 & 051	6	6	100	94.7 J	409 J	FZ0609	234	205 J	266 J	94.7 J	409 J	234	205 J	266 J
brown bullhead	whole-body	PCB046	6	6	100	35.3	114	FZ0609	69.5	65.7	80.8	35.3	114	69.5	65.7	80.8
brown bullhead	whole-body	PCB048	6	6	100	122	580	FZ0609	302	256	313	122	580	302	256	313
brown bullhead	whole-body	PCB049 & 069	6	6	100	790 J	3220 J	FZ0609	2070	1920 J	2820 J	790 J	3220 J	2070	1920 J	2820 J
brown bullhead	whole-body	PCB050 & 053	6	6	100	43.8 J	189 J	FZ0609	122	117 J	143 J	43.8 J	189 J	122	117 J	143 J
brown bullhead	whole-body	PCB052	6	6	100	992	3840	FZ0609	3000	3360	3760	992	3840	3000	3360	3760
brown bullhead	whole-body	PCB054	6	6	100	33.4	85.2	FZ0609	56.4	54	72.7	33.4	85.2	56.4	54	72.7
brown bullhead	whole-body	PCB055	6	0	0							4.56 U	6.85 U	5.08	4.82 U	4.84 U
brown bullhead	whole-body	PCB056	6	6	100	357	1410	FZ0609	707	586	838	357	1410	707	586	838
brown bullhead	whole-body	PCB057	6	6	100	6.26	29.4	FZ0609	16.4	12.7	22.8	6.26	29.4	16.4	12.7	22.8
brown bullhead	whole-body	PCB058	6	3	50	12.4	239	FZ0609	91.9	24.2	24.2	5.97 U	239	49	6.55 U	24.2
brown bullhead	whole-body	PCB059 & 062 & 075	6	6	100	115 J	470 J	FZ0609	268	267 J	286 J	115 J	470 J	268	267 J	286 J
brown bullhead	whole-body	PCB060	6	6	100	391	1610	FZ0609	788	665	774	391	1610	788	665	774
brown bullhead	whole-body	PCB061 & 070 & 074 & 076	6	6	100	1440 J	5580 J	FZ0609	3350	3080 J	4090 J	1440 J	5580 J	3350	3080 J	4090 J
brown bullhead	whole-body	PCB063	6	6	100	83.1	370	FZ0609	203	173	222	83.1	370	203	173	222
brown bullhead	whole-body	PCB064	6	6	100	538	2210	FZ0609	1200	953	1290	538	2210	1200	953	1290
brown bullhead	whole-body	PCB066	6	6	100	1850	7300	FZ0609	4020	3570	4220	1850	7300	4020	3570	4220
brown bullhead	whole-body	PCB067	6	6	100	10.2	52.5	FZ0609	27.7	25.8	30.3	10.2	52.5	27.7	25.8	30.3
brown bullhead	whole-body	PCB068	6	6	100	26.4	184	FZ0609	75.8	47	92	26.4	184	75.8	47	92
brown bullhead	whole-body	PCB072	6	6	100	30.3	113	FZ0609	65.8	49.6	92.2	30.3	113	65.8	49.6	92.2
brown bullhead	whole-body	PCB073	6	2	33.3	59.4	59.7	FZ0609	59.6	59.4	59.4	6.29 U	59.7	24.1	6.32 U	59.4
brown bullhead	whole-body	PCB077	6	6	100	24.9	86.7	FZ0609	47.2	32.4	64.3	24.9	86.7	47.2	32.4	64.3
brown bullhead	whole-body	PCB078	6	4	66.7	4.72	91.7	FZ0609	42.3	8.66	64	4.12 U	91.7	29.6	4.72	64
brown bullhead	whole-body	PCB079	6	6	100	39.2	146	FZ0609	74.2	58.3	82.3	39.2	146	74.2	58.3	82.3
brown bullhead	whole-body	PCB080	6	0	0							5.74 U	6.09 U	5.97	6.06 U	6.09 U
brown bullhead	whole-body	PCB081	6	6	100	8.36	20.2	FZ0609	12.3	10.8	13.3	8.36	20.2	12.3	10.8	13.3
brown bullhead	whole-body	PCB082	6	6	100	255	438	FZ0609	343	338	393	255	438	343	338	393
brown bullhead	whole-body	PCB083 & 099	6	6	100	2030 J	11000 J	FZ0609	6170	5880 J	6750 J	2030 J	11000 J	6170	5880 J	6750 J
brown bullhead	whole-body	PCB084	6	6	100	405	1070	FZ0609	767	738	1070	405	1070	767	738	1070
brown bullhead	whole-body	PCB085 & 116 & 117	6	6	100	663 J	1920 J	FZ0306	1340	1350 J	1730 J	663 J	1920 J	1340	1350 J	1730 J
brown bullhead	whole-body	PCB086 & 087 & 097 & 108 & 119 & 125	6	6	100	1650 J	5390 J	FZ0609	3580	3600 J	4310 J	1650 J	5390 J	3580	3600 J	4310 J
brown bullhead	whole-body	PCB088 & 091	6	6	100	251 J	995 J	FZ0609	701	660 J	930 J	251 J	995 J	701	660 J	930 J
brown bullhead	whole-body	PCB089	6	6	100	15.5	36	FZ0609	25.2	21.2 J	32	15.5	36	25.2	21.2 J	32
brown bullhead	whole-body	PCB090 & 101 & 113	6	6	100	2150 J	34900 J	FZ0609	10900	5910 J	8580 J	2150 J	34900 J	10900	5910 J	8580 J
brown bullhead	whole-body	PCB092	6	6	100	774	5220	FZ0609	2350	1700	2600	774	5220	2350	1700	2600
brown bullhead	whole-body	PCB093 & 095 & 098 & 100 & 102	6	6	100	1370 J	13400 J	FZ0609	5420	3980 J	5750 J	1370 J	13400 J	5420	3980 J	5750 J
brown bullhead	whole-body	PCB094	6	6	100	20.9	85.2	FZ0609	53.2	42.9	81.5	20.9	85.2	53.2	42.9	81.5
brown bullhead	whole-body	PCB096	6	6	100	14.4	53.7	FZ0609	33	26.8	51.3	14.4	53.7	33	26.8	51.3
brown bullhead	whole-body	PCB103	6	6	100	57.8	416	FZ0609	176	102	213	57.8	416	176	102	213
brown bullhead	whole-body	PCB104	6	3	50	9.17	10.4	FZ0609	9.85	9.99	9.99	7.02 U	10.4	8.56	7.41 U	9.99
brown bullhead	whole-body	PCB105	6	6	100	1160	4350	FZ0306	3010	3110	3880	1160	4350	3010	3110	3880
brown bullhead	whole-body	PCB106	6	0	0							9.19 U	9.76 U	9.57	9.71 U	9.76 U
brown bullhead	whole-body	PCB107 & 124	6	6	100	59.6 J	232 J	FZ0609	124	109 J	134 J	59.6 J	232 J	124	109 J	134 J
brown bullhead	whole-body	PCB109	6	6	100	384	1570	FZ0609	953	731	1320	384	1570	953	731	1320
brown bullhead	whole-body	PCB110 & 115	6	6	100	3150 J	7770 J	FZ0609	6230	6360 J	7560 J	3150 J	7770 J	6230	6360 J	7560 J

Table 4-6. Round 1 Summary Statistics of Chemical Concentrations in Brown Bullhead Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
brown bullhead	whole-body	PCB111	6	6	100	10.9	58	FZ0609	23.5	14.7	27.2	10.9	58	23.5	14.7	27.2
brown bullhead	whole-body	PCB112	6	0	0							6.54 U	6.94 U	6.81	6.91 U	6.94 U
brown bullhead	whole-body	PCB114	6	6	100	76.2	362	FZ0306	216	214	245	76.2	362	216	214	245
brown bullhead	whole-body	PCB118	6	6	100	3200	21400	FZ0609	11400	9650	16800	3200	21400	11400	9650	16800
brown bullhead	whole-body	PCB120	6	6	100	40.2	297	FZ0609	111	67.6	139	40.2	297	111	67.6	139
brown bullhead	whole-body	PCB121	6	6	100	6.54	26.4	FZ0609	15.6	12.1	24.2	6.54	26.4	15.6	12.1	24.2
brown bullhead	whole-body	PCB122	6	6	100	39.6	87.1 J	FZ0609	71.9	65.7	87	39.6	87.1 J	71.9	65.7	87
brown bullhead	whole-body	PCB123	6	6	100	60.3	365	FZ0306	174	144	176	60.3	365	174	144	176
brown bullhead	whole-body	PCB126	6	6	100	13.9	42.1	FZ0609	27.1	22.4	40	13.9	42.1	27.1	22.4	40
brown bullhead	whole-body	PCB127	6	4	66.7	15.7	48.4	FZ0609	27.1	18.2	25.9	9.56 U	48.4	21.3	15.7	25.9
brown bullhead	whole-body	PCB128 & 166	6	6	100	1000 J	13700 J	FZ0609	4060	2040 J	3330 J	1000 J	13700 J	4060	2040 J	3330 J
brown bullhead	whole-body	PCB129 & 138 & 160 & 163	6	6	100	8210 J	206000 J	FZ0609	52900	24400 J	31400 J	8210 J	206000 J	52900	24400 J	31400 J
brown bullhead	whole-body	PCB130	6	6	100	505	7560	FZ0609	2010	959	1150	505	7560	2010	959	1150
brown bullhead	whole-body	PCB131	6	6	100	31.7	398	FZ0609	115	58	104	31.7	398	115	58	104
brown bullhead	whole-body	PCB132	6	6	100	1120	5370	FZ0609	2850	1980	4350	1120	5370	2850	1980	4350
brown bullhead	whole-body	PCB133	6	6	100	185	3160	FZ0609	891	429	741	185	3160	891	429	741
brown bullhead	whole-body	PCB134 & 143	6	4	66.7	210 J	3760 J	FZ0609	1220	216 J	704 J	9.86 U	3760 J	818	210 J	704 J
brown bullhead	whole-body	PCB135 & 151 & 154	6	6	100	2140 J	46800 J	FZ0609	12100	3990 J	8280 J	2140 J	46800 J	12100	3990 J	8280 J
brown bullhead	whole-body	PCB136	6	6	100	410	2870	FZ0609	1260	708	1790	410	2870	1260	708	1790
brown bullhead	whole-body	PCB137	6	6	100	278	2600	FZ0306	1100	728	1530	278	2600	1100	728	1530
brown bullhead	whole-body	PCB139 & 140	6	6	100	82.9 J	309 J	FZ0609	219	199 J	278 J	82.9 J	309 J	219	199 J	278 J
brown bullhead	whole-body	PCB141	6	6	100	1210	29700	FZ0609	7700	3200	5070	1210	29700	7700	3200	5070
brown bullhead	whole-body	PCB142	6	0	0							5.67 U	12.1 U	7.51	6.01 U	9.53 U
brown bullhead	whole-body	PCB144	6	6	100	180	10100	FZ0609	2110	387	960	180	10100	2110	387	960
brown bullhead	whole-body	PCB145	6	0	0							2.23 U	2.36 U	2.32	2.35 U	2.36 U
brown bullhead	whole-body	PCB146	6	6	100	1820	47200	FZ0609	12200	5300	8780	1820	47200	12200	5300	8780
brown bullhead	whole-body	PCB147 & 149	6	6	100	3530 J	104000 J	FZ0609	24200	6680 J	14100 J	3530 J	104000 J	24200	6680 J	14100 J
brown bullhead	whole-body	PCB148	6	6	100	30.2	108	FZ0609	65.4	47.1	105	30.2	108	65.4	47.1	105
brown bullhead	whole-body	PCB150	6	6	100	10.5	87	FZ0609	39.4	24	54	10.5	87	39.4	24	54
brown bullhead	whole-body	PCB152	6	6	100	5.76	23.8	FZ0609	13.6	12.1	20.4	5.76	23.8	13.6	12.1	20.4
brown bullhead	whole-body	PCB153 & 168	6	6	100	5470 J	285000 J	FZ0609	65800	23000 J	42100 J	5470 J	285000 J	65800	23000 J	42100 J
brown bullhead	whole-body	PCB155	6	4	66.7	4.91	10	FZ0609	7.14	5.63	8.01	4.31 U	10	6.2	4.91	8.01
brown bullhead	whole-body	PCB156	6	6	100	529	17200	FZ0609	4400	1770	3120	529	17200	4400	1770	3120
brown bullhead	whole-body	PCB157	6	6	100	93.1	979	FZ0609	409	226	677	93.1	979	409	226	677
brown bullhead	whole-body	PCB158	6	6	100	644	19500	FZ0609	4760	2180	2400	644	19500	4760	2180	2400
brown bullhead	whole-body	PCB159	6	6	100	57.3	2450	FZ0609	532	94.9	291	57.3	2450	532	94.9	291
brown bullhead	whole-body	PCB161	6	0	0							6.28 U	7.83 U	6.73	6.63 U	6.67 U
brown bullhead	whole-body	PCB162	6	6	100	34.2	302	FZ0609	104	54.3	120	34.2	302	104	54.3	120
brown bullhead	whole-body	PCB164	6	6	100	401	15200	FZ0609	3360	1220	1380	401	15200	3360	1220	1380
brown bullhead	whole-body	PCB165	6	5	83.3	11.6	39.8	FZ0609	24.8	20.1	36.2	7.25 U	39.8	21.9	16.4	36.2
brown bullhead	whole-body	PCB167	6	6	100	296	8270	FZ0609	2190	829	1780	296	8270	2190	829	1780
brown bullhead	whole-body	PCB169	6	6	100	1.41	4.45	FZ0609	2.27	1.43	2.86	1.41	4.45	2.27	1.43	2.86
brown bullhead	whole-body	PCB170	6	6	100	2080	99500	FZ0609	21800	6900	10700	2080	99500	21800	6900	10700
brown bullhead	whole-body	PCB171 & 173	6	6	100	641 J	16700 J	FZ0609	4170	1510 J	2650 J	641 J	16700 J	4170	1510 J	2650 J
brown bullhead	whole-body	PCB172	6	6	100	473	16300	FZ0609	3680	1220	1880	473	16300	3680	1220	1880
brown bullhead	whole-body	PCB174	6	6	100	1460	72900	FZ0609	15000	2390	6450	1460	72900	15000	2390	6450
brown bullhead	whole-body	PCB175	6	6	100	84.3	3770	FZ0609	831	221	416	84.3	3770	831	221	416
brown bullhead	whole-body	PCB176	6	6	100	109	4880	FZ0609	1060	195	682	109	4880	1060	195	682
brown bullhead	whole-body	PCB177	6	6	100	1450	59400	FZ0609	12300	2170	4880	1450	59400	12300	2170	4880
brown bullhead	whole-body	PCB178	6	6	100	600	20100	FZ0609	4510	1120	2340	600	20100	4510	1120	2340

Table 4-6. Round 1 Summary Statistics of Chemical Concentrations in Brown Bullhead Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
brown bullhead	whole-body	PCB179	6	6	100	666	8470	FZ0609	2660	1050	2720	666	8470	2660	1050	2720
brown bullhead	whole-body	PCB180 & 193	6	6	100	5890 J	294000 J	FZ0609	66700	22600 J	43700 J	5890 J	294000 J	66700	22600 J	43700 J
brown bullhead	whole-body	PCB181	6	6	100	21.1	451	FZ0609	119	46.9	93.8	21.1	451	119	46.9	93.8
brown bullhead	whole-body	PCB182	6	5	83.3	19.2 J	68.8	FZ0609	45.2	38.5	68.1	7.99 U	68.8	39	31.2	68.1
brown bullhead	whole-body	PCB183 & 185	6	6	100	1410 J	71700 J	FZ0609	15700	4140 J	8130 J	1410 J	71700 J	15700	4140 J	8130 J
brown bullhead	whole-body	PCB184	6	1	16.7	10.3	10.3	FZ0609	10.3	10.3	10.3	6.64 U	10.3	7.45	7.01 U	7.05 U
brown bullhead	whole-body	PCB186	6	0	0							3.82 U	4.06 U	3.98	4.04 U	4.06 U
brown bullhead	whole-body	PCB187	6	6	100	4220	163000	FZ0609	36900	11500	21700	4220	163000	36900	11500	21700
brown bullhead	whole-body	PCB188	6	6	100	9.19	67.6	FZ0609	24.7	13.9	29.3	9.19	67.6	24.7	13.9	29.3
brown bullhead	whole-body	PCB189	6	6	100	67.7	4140	FZ0609	909	267	579	67.7	4140	909	267	579
brown bullhead	whole-body	PCB190	6	6	100	467	15600	FZ0609	3720	1470	2220	467	15600	3720	1470	2220
brown bullhead	whole-body	PCB191	6	6	100	81	5110	FZ0609	1110	355	602	81	5110	1110	355	602
brown bullhead	whole-body	PCB192	6	0	0							3.45 U	3.66 U	3.59	3.64 U	3.66 U
brown bullhead	whole-body	PCB194	6	6	100	833	32700	FZ0609	7590	2910	4670	833	32700	7590	2910	4670
brown bullhead	whole-body	PCB195	6	6	100	364	13300	FZ0609	3140	1110	1960	364	13300	3140	1110	1960
brown bullhead	whole-body	PCB196	6	6	100	464	18400	FZ0609	4370	1620	3000	464	18400	4370	1620	3000
brown bullhead	whole-body	PCB197 & 200	6	6	100	123 J	3460 J	FZ0609	801	205 J	438 J	123 J	3460 J	801	205 J	438 J
brown bullhead	whole-body	PCB198 & 199	6	6	100	1240 J	33000 J	FZ0609	8030	3330 J	4860 J	1240 J	33000 J	8030	3330 J	4860 J
brown bullhead	whole-body	PCB201	6	6	100	135	3940	FZ0609	940	263	608	135	3940	940	263	608
brown bullhead	whole-body	PCB202	6	6	100	237	5010	FZ0609	1280	436	861	237	5010	1280	436	861
brown bullhead	whole-body	PCB203	6	6	100	775	6940	FZ0609	2650	2040	2610	775	6940	2650	2040	2610
brown bullhead	whole-body	PCB204	6	0	0							9.12 U	9.68 U	9.49	9.63 U	9.68 U
brown bullhead	whole-body	PCB205	6	6	100	46.9	885	FZ0609	241	110	174	46.9	885	241	110	174
brown bullhead	whole-body	PCB206	6	6	100	376	1770	FZ0609	821	612	816	376	1770	821	612	816
brown bullhead	whole-body	PCB207	6	6	100	61.9	606	FZ0609	192	106	154	61.9	606	192	106	154
brown bullhead	whole-body	PCB208	6	6	100	176	849	FZ0609	331	212	288	176	849	331	212	288
brown bullhead	whole-body	PCB209	6	6	100	195	264	FZ0306	229	226	252	195	264	229	226	252
		Dioxins/Furans (pg/g)														
brown bullhead	whole-body	Tetrachlorodibenzo-p-dioxin	6	6	100	0.273	0.543	FZ0609	0.392	0.372	0.461	0.273	0.543	0.392	0.372	0.461
brown bullhead	whole-body	Pentachlorodibenzo-p-dioxin	6	6	100	0.564	0.846	FZ0609	0.671	0.63	0.717	0.564	0.846	0.671	0.63	0.717
brown bullhead	whole-body	Hexachlorodibenzo-p-dioxin	6	6	100	1.78	3.29	FZ0609	2.29	2.15	2.26	1.78	3.29	2.29	2.15	2.26
brown bullhead	whole-body	Heptachlorodibenzo-p-dioxin	6	6	100	2.16	3.51	FZ0609	2.97	2.93	3.32	2.16	3.51	2.97	2.93	3.32
brown bullhead	whole-body	Octachlorodibenzo-p-dioxin	6	6	100	1.61	3.89	FZ0609	2.72	2.62	3.36	1.61	3.89	2.72	2.62	3.36
brown bullhead	whole-body	Tetrachlorodibenzofuran	6	6	100	0.743	1.24	FZ0306	0.992	0.941	1.2	0.743	1.24	0.992	0.941	1.2
brown bullhead	whole-body	Pentachlorodibenzofuran	6	6	100	1.85	3.02	FZ0609	2.25	2	2.55	1.85	3.02	2.25	2	2.55
brown bullhead	whole-body	Hexachlorodibenzofuran	6	6	100	0.867	2.48	FZ0609	1.48	1.39	1.48	0.867	2.48	1.48	1.39	1.48
brown bullhead	whole-body	Heptachlorodibenzofuran	6	6	100	0.21	0.63	FZ0306	0.454	0.445	0.616	0.21	0.63	0.454	0.445	0.616
brown bullhead	whole-body	Octachlorodibenzofuran	6	1	16.7	0.112	0.112	FZ0306	0.112	0.112	0.112	0.046 U	0.181 U	0.112	0.112	0.163 U
brown bullhead	whole-body	2,3,7,8-Tetrachlorodibenzo-p-dioxin	6	6	100	0.253	0.522	FZ0609	0.355	0.343	0.409	0.253	0.522	0.355	0.343	0.409
brown bullhead	whole-body	2,3,7,8-TCDD TEQ	6	6	100	3.65 T	18.9 T	FZ0609	8.57	6.03 T	9.75 T	3.65 T	18.9 T	8.57	6.03 T	9.75 T
brown bullhead	whole-body	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	6	6	100	0.54	0.756	FZ0609	0.627	0.582	0.679	0.54	0.756	0.627	0.582	0.679
brown bullhead	whole-body	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	6	6	100	0.224	0.296	FZ0306	0.256	0.246	0.282	0.224	0.296	0.256	0.246	0.282
brown bullhead	whole-body	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	6	6	100	1.05	2.19	FZ0609	1.53	1.46	1.54	1.05	2.19	1.53	1.46	1.54
brown bullhead	whole-body	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	6	6	100	0.167	0.313	FZ0609	0.214	0.187	0.22	0.167	0.313	0.214	0.187	0.22
brown bullhead	whole-body	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	6	6	100	1.21	2.52	FZ0609	1.94	1.9	2.27	1.21	2.52	1.94	1.9	2.27
brown bullhead	whole-body	2,3,7,8-Tetrachlorodibenzofuran	6	6	100	0.344	0.715	FZ0306	0.565	0.532	0.698	0.344	0.715	0.565	0.532	0.698
brown bullhead	whole-body	1,2,3,7,8-Pentachlorodibenzofuran	6	6	100	0.29	0.477	FZ0609	0.342	0.302	0.362	0.29	0.477	0.342	0.302	0.362
brown bullhead	whole-body	2,3,4,7,8-Pentachlorodibenzofuran	6	6	100	0.58	1.53	FZ0609	0.822	0.657	0.831	0.58	1.53	0.822	0.657	0.831
brown bullhead	whole-body	1,2,3,4,7,8-Hexachlorodibenzofuran	6	6	100	0.215	0.966	FZ0609	0.384	0.263	0.344	0.215	0.966	0.384	0.263	0.344
brown bullhead	whole-body	1,2,3,6,7,8-Hexachlorodibenzofuran	6	6	100	0.108	0.286	FZ0609	0.152	0.128	0.136	0.108	0.286	0.152	0.128	0.136

Table 4-6. Round 1 Summary Statistics of Chemical Concentrations in Brown Bullhead Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	**Tissue Type**	**Analyte**	**N**	**Detected**	**Detected**	**Minimum**	**Maximum**	**Location**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th UCL**
brown bullhead	whole-body	1,2,3,7,8,9-Hexachlorodibenzofuran	6	4	66.7	0.011	0.017	FZ0609	0.0138	0.013	0.014	0.011	0.018 U	0.0147	0.014	0.017
brown bullhead	whole-body	2,3,4,6,7,8-Hexachlorodibenzofuran	6	6	100	0.065 J	0.148	FZ0609	0.0928	0.08 J	0.104	0.065 J	0.148	0.0928	0.08 J	0.104
brown bullhead	whole-body	1,2,3,4,6,7,8-Heptachlorodibenzofuran	6	6	100	0.141	0.288	FZ0306	0.235	0.229	0.274	0.141	0.288	0.235	0.229	0.274
brown bullhead	whole-body	1,2,3,4,7,8,9-Heptachlorodibenzofuran	6	3	50	0.021 J	0.031	FZ0306	0.0263	0.027	0.027	0.016 U	0.031	0.0212	0.016 U	0.027

Notes:

The mean, median, and 95^{th} upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table 4-7. Round 1 Summary Statistics of Chemical Concentrations in Black Crappie Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
		Conventionals (percent)														
black crappie	fillet	Total solids	4	4	100	20.6 T	22.1	FZ0306	21.2	20.8	21.4	20.6 T	22.1	21.2	20.8	21.4
black crappie	whole-body	Total solids	4	4	100	25.8 T	29.5	FZ0609	27.6	27	28.2	25.8 T	29.5	27.6	27	28.2
black crappie	fillet	Lipids	4	4	100	0.99	1.8	FZ0306	1.4	1.2	1.6	0.99	1.8	1.4	1.2	1.6
black crappie	whole-body	Lipids	4	4	100	3.33 T	7.5 T	FZ0609	5.26	3.7	6.5	3.33 T	7.5 T	5.26	3.7	6.5
		Metals (mg/kg)														
black crappie	fillet	Aluminum	4	4	100	3.04 JT	7.03 J	FZ0306	5.23	4.57 J	6.29 J	3.04 JT	7.03 J	5.23	4.57 J	6.29 J
black crappie	whole-body	Aluminum	4	4	100	5.8 J	68.9	FZ0609	22.4	6.37	8.43 J	5.8 J	68.9	22.4	6.37	8.43 J
black crappie	fillet	Antimony	4	0	0							0.001 U	0.001 UT	0.001	0.001 U	0.001 U
black crappie	whole-body	Antimony	4	0	0							0.001 U	0.001 U	0.001	0.001 UT	0.001 U
black crappie	fillet	Arsenic	4	4	100	0.1 J	0.18 T	FZ0609	0.14	0.13	0.15	0.1 J	0.18 T	0.14	0.13	0.15
black crappie	whole-body	Arsenic	4	4	100	0.185 T	0.42	FZ0609	0.279	0.22	0.29	0.185 T	0.42	0.279	0.22	0.29
black crappie	fillet	Cadmium	4	2	50	0.001 J	0.001 JT	FZ0609	0.001	0.001 J	0.001 J	0.001 U	0.001 JT	0.001	0.001 J	0.001 U
black crappie	whole-body	Cadmium	4	4	100	0.003 J	0.006 J	FZ0609	0.00388	0.003 J	0.0035 JT	0.003 J	0.006 J	0.00388	0.003 J	0.0035 JT
black crappie	fillet	Chromium	4	2	50	0.14	0.28	FZ0306	0.21	0.14	0.14	0.06 U	0.28	0.135	0.06 UT	0.14
black crappie	whole-body	Chromium	4	0	0							0.08 U	0.09 U	0.0825	0.08 UT	0.08 U
black crappie	fillet	Copper	4	4	100	0.166	0.184 T	FZ0609	0.178	0.178	0.184	0.166	0.184 T	0.178	0.178	0.184
black crappie	whole-body	Copper	4	4	100	0.688	0.946	FZ0306	0.82	0.721	0.923 T	0.688	0.946	0.82	0.721	0.923 T
black crappie	fillet	Lead	4	0	0							0.001 U	0.005 U	0.00225	0.001 UT	0.002 U
black crappie	whole-body	Lead	4	1	25	0.0185 JT	0.0185 JT	FZ0306	0.0185	0.0185 JT	0.0185 JT	0.004 UJ	0.0185 JT	0.00863	0.005 UJ	0.007 UJ
black crappie	fillet	Manganese	4	4	100	0.083 J	0.168 J	FZ0306	0.13	0.128 JT	0.142 J	0.083 J	0.168 J	0.13	0.128 JT	0.142 J
black crappie	whole-body	Manganese	4	4	100	2.8	3.41	FZ0306	3.12	2.91 T	3.36	2.8	3.41	3.12	2.91 T	3.36
black crappie	fillet without skin	Mercury	4	4	100	0.067	0.101	FZ0609	0.086	0.086	0.09	0.067	0.101	0.086	0.086	0.09
black crappie	whole-body	Mercury	4	4	100	0.033	0.044	FZ0609	0.0394	0.0365 T	0.044	0.033	0.044	0.0394	0.0365 T	0.044
black crappie	fillet	Nickel	4	2	50	0.057	0.064	FZ0306	0.0605	0.057	0.057	0.001 U	0.064	0.0308	0.001 UT	0.057
black crappie	whole-body	Nickel	4	4	100	0.33 JT	0.357 J	FZ0609	0.343	0.338 J	0.347 J	0.33 JT	0.357 J	0.343	0.338 J	0.347 J
black crappie	fillet	Selenium	4	0	0							0.3 U	0.4 UT	0.325	0.3 U	0.3 U
black crappie	whole-body	Selenium	4	0	0							0.3 U	0.3 U	0.3	0.3 UT	0.3 U
black crappie	fillet	Silver	4	0	0							0.0002 U	0.0002 UT	0.0002	0.0002 U	0.0002 U
black crappie	whole-body	Silver	4	0	0							0.0004 U	0.002 U	0.00118	0.0006 U	0.0017 UT
black crappie	fillet	Thallium	4	4	100	0.0046	0.0099 T	FZ0609	0.0071	0.0069	0.007	0.0046	0.0099 T	0.0071	0.0069	0.007
black crappie	whole-body	Thallium	4	4	100	0.006 T	0.0167	FZ0609	0.0108	0.0084	0.0122	0.006 T	0.0167	0.0108	0.0084	0.0122
black crappie	fillet	Zinc	4	4	100	7.45	9.03	FZ0306	8.23	7.75 T	8.69	7.45	9.03	8.23	7.75 T	8.69
black crappie	whole-body	Zinc	4	4	100	14.2 T	16.8	FZ0609	15.4	15.1	15.5	14.2 T	16.8	15.4	15.1	15.5
		PCB Aroclors (ug/kg)														
black crappie	fillet	Aroclor 1016	4	0	0							0.95 U	1.9 U	1.66	1.9 U	1.9 U
black crappie	whole-body	Aroclor 1016	4	0	0							1.9 U	9.5 U	3.8	1.9 U	1.9 U
black crappie	fillet	Aroclor 1242	4	0	0							0.95 U	1.9 U	1.66	1.9 U	1.9 U
black crappie	whole-body	Aroclor 1242	4	0	0							1.9 U	9.5 U	3.8	1.9 U	1.9 U
black crappie	fillet	Aroclor 1248	4	4	100	6.6	16	FZ0609	10.4	9.2	9.6	6.6	16	10.4	9.2	9.6
black crappie	whole-body	Aroclor 1248	4	4	100	39	110	FZ0609	58.3	42	42	39	110	58.3	42	42
black crappie	fillet	Aroclor 1254	4	0	0							9.9 U	18 U	13.7	13 U	14 U
black crappie	whole-body	Aroclor 1254	4	0	0							67 U	130 U	89.3	69 U	91 U
black crappie	fillet	Aroclor 1260	4	4	100	13	16	FZ0609	13.8	13	13	13	16	13.8	13	13
black crappie	whole-body	Aroclor 1260	4	4	100	46	140	FZ0609	75.3	48	67	46	140	75.3	48	67
black crappie	fillet	Aroclor 1262	4	0	0							0.95 U	1.9 U	1.66	1.9 U	1.9 U
black crappie	whole-body	Aroclor 1262	4	0	0							1.9 U	9.5 U	3.8	1.9 U	1.9 U
black crappie	fillet	Aroclor 1268	4	0	0							0.95 U	1.9 U	1.66	1.9 U	1.9 U

Table 4-7. Round 1 Summary Statistics of Chemical Concentrations in Black Crappie Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
black crappie	whole-body	Aroclor 1268	4	0	0							1.9 U	9.5 U	3.8	1.9 U	1.9 U
black crappie	fillet	Aroclor 1221	4	0	0							0.95 U	1.9 U	1.66	1.9 U	1.9 U
black crappie	whole-body	Aroclor 1221	4	0	0							1.9 U	9.5 U	3.8	1.9 U	1.9 U
black crappie	fillet	Aroclor 1232	4	0	0							0.95 U	1.9 U	1.66	1.9 U	1.9 U
black crappie	whole-body	Aroclor 1232	4	0	0							1.9 U	9.5 U	3.8	1.9 U	1.9 U
black crappie	fillet	Total PCB Aroclors	4	4	100	19.6 T	32 T	FZ0609	24.1	22.2 T	22.6 T	19.6 T	32 T	24.1	22.2 T	22.6 T
black crappie	whole-body	Total PCB Aroclors	4	4	100	85 T	250 T	FZ0609	134	90 T	109 T	85 T	250 T	134	90 T	109 T
		Organochlorine Pesticides (ug/kg)														
black crappie	fillet	2,4'-DDD	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	2,4'-DDD	4	0	0							2 U	3.7 U	2.95	3 UT	3.1 U
black crappie	fillet	2,4'-DDE	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	2,4'-DDE	4	0	0							1 U	1.1 U	1.05	1 UT	1.1 U
black crappie	fillet	2,4'-DDT	4	2	50	1.1 NJ	1.1 NJ	FZ0609	1.1	1.1 NJ	1.1 NJ	1 U	1.1 NJ	1.05	1 U	1.1 NJ
black crappie	whole-body	2,4'-DDT	4	3	75	4.7 NJ	6.6 NJ	FZ0609	5.43	5 NJ	5 NJ	4.7 NJ	6.9 UT	5.8	5 NJ	6.6 NJ
black crappie	fillet	4,4'-DDD	4	4	100	1.8 J	2.7 J	FZ0609	2.23	2 N	2.4 J	1.8 J	2.7 J	2.23	2 N	2.4 J
black crappie	whole-body	4,4'-DDD	4	4	100	7.9 J	18.5 JT	FZ0609	12.1	11 J	11 J	7.9 J	18.5 JT	12.1	11 J	11 J
black crappie	fillet	4,4'-DDE	4	4	100	5.5	7.8	FZ0609	6.73	6.5	7.1	5.5	7.8	6.73	6.5	7.1
black crappie	whole-body	4,4'-DDE	4	4	100	37 J	80.5 T	FZ0609	55.6	38	67	37 J	80.5 T	55.6	38	67
black crappie	fillet	4,4'-DDT	4	4	100	1.5 J	2.3 NJ	FZ0609	1.85	1.5 J	2.1 J	1.5 J	2.3 NJ	1.85	1.5 J	2.1 J
black crappie	whole-body	4,4'-DDT	4	3	75	8.6 J	15 J	FZ0609	11.2	10 J	10 J	6.3 UT	15 J	9.98	8.6 J	10 J
black crappie	fillet	Total of 3 isomers: pp-DDT,-DDD,-DDE	4	4	100	8.8 JT	12.6 JT	FZ0609	10.8	10.4 JT	11.4 JT	8.8 JT	12.6 JT	10.8	10.4 JT	11.4 JT
black crappie	whole-body	Total of 3 isomers: pp-DDT,-DDD,-DDE	4	4	100	54.5 JT	99 JT	FZ0609	76.1	58 JT	93 JT	54.5 JT	99 JT	76.1	58 JT	93 JT
black crappie	fillet	Aldrin	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	Aldrin	4	0	0							1 U	1.3 U	1.08	1 UJ	1 UT
black crappie	fillet	alpha-Hexachlorocyclohexane	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	alpha-Hexachlorocyclohexane	4	1	25	1.4 NJ	1.4 NJ	FZ0609	1.4	1.4 NJ	1.4 NJ	1 U	1.4 NJ	1.1	1 U	1 UT
black crappie	fillet	beta-Hexachlorocyclohexane	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	beta-Hexachlorocyclohexane	4	0	0							1.5 UJ	3.8 U	2.28	1.5 UT	2.3 UJ
black crappie	fillet	delta-Hexachlorocyclohexane	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	delta-Hexachlorocyclohexane	4	1	25	2.3 NJ	2.3 NJ	FZ0609	2.3	2.3 NJ	2.3 NJ	1 U	7.3 UT	2.9	1 U	2.3 NJ
black crappie	fillet	gamma-Hexachlorocyclohexane	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	gamma-Hexachlorocyclohexane	4	0	0							1 U	1.6 U	1.28	1 UT	1.5 U
black crappie	fillet	cis-Chlordane	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	cis-Chlordane	4	4	100	1.4 N	3.5 NJ	FZ0306	2.6	2.1 NJ	3.4 NJ	1.4 N	3.5 NJ	2.6	2.1 NJ	3.4 NJ
black crappie	fillet	trans-Chlordane	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	trans-Chlordane	4	1	25	3.7 N	3.7 N	FZ0609	3.7	3.7 N	3.7 N	1 U	3.7 N	1.78	1 U	1.4 UT
black crappie	fillet	Oxychlordane	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	Oxychlordane	4	2	50	2.2 NJ	2.3 N	FZ0306	2.25	2.2 NJ	2.2 NJ	1 U	2.3 N	1.63	1 UT	2.2 NJ
black crappie	fillet	cis-Nonachlor	4	0	0							1.2 U	1.6 U	1.48	1.5 U	1.6 U
black crappie	whole-body	cis-Nonachlor	4	0	0							5.8 U	7.3 U	6.78	6.9 U	7.1 UT
black crappie	fillet	trans-Nonachlor	4	1	25	1.1 NJ	1.1 NJ	FZ0306	1.1	1.1 NJ	1.1 NJ	1 U	1.1 NJ	1.03	1 U	1 U
black crappie	whole-body	trans-Nonachlor	4	2	50	3.2 NJ	3.5 NJ	FZ0306	3.35	3.2 NJ	3.2 NJ	1.8 U	3.5 NJ	2.68	2.2 UT	3.2 NJ
black crappie	fillet	Dieldrin	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	Dieldrin	4	1	25	2.5 NJ	2.5 NJ	FZ0609	2.5	2.5 NJ	2.5 NJ	1.8 U	14 UT	5.05	1.9 U	2.5 NJ
black crappie	fillet	alpha-Endosulfan	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	alpha-Endosulfan	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	fillet	beta-Endosulfan	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	beta-Endosulfan	4	0	0							1 U	1.3 U	1.1	1 U	1.1 UT

Table 4-7. Round 1 Summary Statistics of Chemical Concentrations in Black Crappie Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
black crappie	fillet	Endosulfan sulfate	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	Endosulfan sulfate	4	1	25	1.1 NJ	1.1 NJ	FZ0306	1.1	1.1 NJ	1.1 NJ	1 UJ	12 UT	3.78	1 U	1.1 NJ
black crappie	fillet	Endrin	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	Endrin	4	0	0							1 U	1.3 U	1.13	1 U	1.2 UT
black crappie	fillet	Endrin aldehyde	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	Endrin aldehyde	4	0	0							1 UJ	1.4 U	1.13	1 UJT	1.1 U
black crappie	fillet	Endrin ketone	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	Endrin ketone	4	0	0							1 U	1 UT	1	1 U	1 U
black crappie	fillet	Heptachlor	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	Heptachlor	4	1	25	1.8 N	1.8 N	FZ0306	1.8	1.8 N	1.8 N	1 U	1.8 N	1.28	1 UT	1.3 U
black crappie	fillet	Heptachlor epoxide	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	Heptachlor epoxide	4	0	0							1 U	1 UT	1	1 UJ	1 U
black crappie	fillet	Methoxychlor	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	Methoxychlor	4	0	0							1 U	2.5 U	1.6	1 U	1.9 UT
black crappie	fillet	Mirex	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	Mirex	4	0	0							1 U	1 UT	1	1 U	1 U
black crappie	fillet	Toxaphene	4	0	0							50 UJ	83 U	58.3	50 U	50 U
black crappie	whole-body	Toxaphene	4	0	0							96 U	280 U	197	200 U	210 U
		Semivolatile Organic Compounds (ug/kg)														
black crappie	fillet	Hexachlorobenzene	4	0	0							1 U	1 U	1	1 U	1 U
black crappie	whole-body	Hexachlorobenzene	4	2	50	5.7 NT	8.1 N	FZ0609	6.9	5.7 NT	5.7 NT	1 U	8.1 N	3.98	1.1 U	5.7 NT
black crappie	fillet	Hexachlorobutadiene	4	0	0							1 U	1 UJ	1	1 U	1 U
black crappie	whole-body	Hexachlorobutadiene	4	3	75	1.3 NJ	2.3 NJ	FZ0609	1.67	1.4 NJ	1.4 NJ	1 UJT	2.3 NJ	1.5	1.3 NJ	1.4 NJ
black crappie	fillet	Hexachloroethane	4	0	0							1 U	1 UJ	1	1 U	1 U
black crappie	whole-body	Hexachloroethane	4	0	0							1 UJ	1 UJT	1	1 UJ	1 UJ
		PCB Congeners (pg/g)														
black crappie	whole-body	PCB001	2	2	100	6.85 J	21.9 J	FZ0609	14.4	6.85 J	6.85 J	6.85 J	21.9 J	14.4	6.85 J	6.85 J
black crappie	whole-body	PCB002	2	2	100	2.44 J	2.48 J	FZ0609	2.46	2.44 J	2.44 J	2.44 J	2.48 J	2.46	2.44 J	2.44 J
black crappie	whole-body	PCB003	2	2	100	4.66 J	8.7 J	FZ0609	6.68	4.66 J	4.66 J	4.66 J	8.7 J	6.68	4.66 J	4.66 J
black crappie	whole-body	PCB004	4	4	100	218	596	FZ0609	351	244	347	218	596	351	244	347
black crappie	whole-body	PCB005	4	0	0							2.39 U	5.8 U	4	3.39 U	4.42 U
black crappie	whole-body	PCB006	4	4	100	16.8	50.6	FZ0609	36.4	37.2	40.8 J	16.8	50.6	36.4	37.2	40.8 J
black crappie	whole-body	PCB007	4	4	100	4.82	13.9 J	FZ0306	9.75	9.06 J	11.2	4.82	13.9 J	9.75	9.06 J	11.2
black crappie	whole-body	PCB008	4	4	100	92.7	441	FZ0609	256	219	272	92.7	441	256	219	272
black crappie	whole-body	PCB009	4	3	75	4.81	12.7 J	FZ0306	8.87	9.11	9.11	4.63 U	12.7 J	7.81	4.81	9.11
black crappie	whole-body	PCB010	4	4	100	9.77 J	28	FZ0609	15.7	9.89	15.2 J	9.77 J	28	15.7	9.89	15.2 J
black crappie	whole-body	PCB011	4	4	100	171	588	FZ0609	337	179 J	411	171	588	337	179 J	411
black crappie	whole-body	PCB012 & 013	4	2	50	16.5 J	46.2 J	FZ0609	31.4	16.5 J	16.5 J	9.79 U	46.2 J	20.6	9.89 U	16.5 J
black crappie	whole-body	PCB014	4	0	0							3.14 U	5.81 U	4.49	3.26 U	5.75 U
black crappie	whole-body	PCB015	4	4	100	47.7	130	FZ0609	94.1	82.5	116	47.7	130	94.1	82.5	116
black crappie	whole-body	PCB016	4	4	100	111	278	FZ0306	207	217	222	111	278	207	217	222
black crappie	whole-body	PCB017	4	4	100	297	1150	FZ0609	598	401	544	297	1150	598	401	544
black crappie	whole-body	PCB018 & 030	4	4	100	202 J	451 J	FZ0306	357	363 J	412 J	202 J	451 J	357	363 J	412 J
black crappie	whole-body	PCB019	4	4	100	356	901	FZ0609	524	364	476	356	901	524	364	476
black crappie	whole-body	PCB020 & 028	4	4	100	1150 J	6090 J	FZ0609	2710	1750 J	1850 J	1150 J	6090 J	2710	1750 J	1850 J
black crappie	whole-body	PCB021 & 033	4	4	100	197 J	569 J	FZ0609	405	365 J	488 J	197 J	569 J	405	365 J	488 J
black crappie	whole-body	PCB022	4	4	100	252	1180	FZ0609	580	412	475	252	1180	580	412	475
black crappie	whole-body	PCB023	4	0	0							3.58 U	7.19 U	5.44	3.88 U	7.12 U

Table 4-7. Round 1 Summary Statistics of Chemical Concentrations in Black Crappie Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
black crappie	whole-body	PCB024	4	4	100	5.27	14.2	FZ0306	10.3	10.2 J	11.7	5.27	14.2	10.3	10.2 J	11.7
black crappie	whole-body	PCB025	4	4	100	93.5	558	FZ0609	221	115	117	93.5	558	221	115	117
black crappie	whole-body	PCB026 & 029	4	4	100	202 J	1240 J	FZ0609	488	252 J	258 J	202 J	1240 J	488	252 J	258 J
black crappie	whole-body	PCB027	4	4	100	60.8	309	FZ0609	140	80	109	60.8	309	140	80	109
black crappie	whole-body	PCB031	4	4	100	903	4680	FZ0609	1990	1170	1190	903	4680	1990	1170	1190
black crappie	whole-body	PCB032	4	4	100	180	1240	FZ0609	511	261	363	180	1240	511	261	363
black crappie	whole-body	PCB034	4	4	100	4.05	18.4	FZ0609	9.07	5.85	7.97	4.05	18.4	9.07	5.85	7.97
black crappie	whole-body	PCB035	4	1	25	5.33	5.33	FZ0609	5.33	5.33	5.33	2.34 U	5.62 U	4.41	4.33 U	5.33
black crappie	whole-body	PCB036	4	2	50	72	261	FZ0609	167	72	72	7.2 U	261	86.9	7.27 U	72
black crappie	whole-body	PCB037	4	4	100	124	595	FZ0609	320	280	282	124	595	320	280	282
black crappie	whole-body	PCB038	4	1	25	3.67	3.67	FZ0609	3.67	3.67	3.67	2.92 U	5.41 U	4.34	3.67	5.36 U
black crappie	whole-body	PCB039	4	4	100	5.56	27.2	FZ0609	13.6	10.4	11.2	5.56	27.2	13.6	10.4	11.2
black crappie	whole-body	PCB040 & 041 & 071	4	4	100	716 J	2730 J	FZ0609	1270	760 J	874 J	716 J	2730 J	1270	760 J	874 J
black crappie	whole-body	PCB042	4	4	100	446	1970	FZ0609	859	499	519	446	1970	859	499	519
black crappie	whole-body	PCB043	4	4	100	72	245	FZ0609	127	76.5	113	72	245	127	76.5	113
black crappie	whole-body	PCB044 & 047 & 065	4	4	100	2200 J	11000 J	FZ0609	4710	2520 J	3110 J	2200 J	11000 J	4710	2520 J	3110 J
black crappie	whole-body	PCB045 & 051	4	4	100	295 J	1140 J	FZ0609	549	365 J	396 J	295 J	1140 J	549	365 J	396 J
black crappie	whole-body	PCB046	4	4	100	43.5	134	FZ0609	80.4	61.1	82.9	43.5	134	80.4	61.1	82.9
black crappie	whole-body	PCB048	4	4	100	224	798	FZ0609	401	268	312	224	798	401	268	312
black crappie	whole-body	PCB049 & 069	4	4	100	1420 J	7390 J	FZ0609	3150	1610 J	2190 J	1420 J	7390 J	3150	1610 J	2190 J
black crappie	whole-body	PCB050 & 053	4	4	100	226 J	795 J	FZ0609	399	274 J	300 J	226 J	795 J	399	274 J	300 J
black crappie	whole-body	PCB052	4	4	100	2530	11900	FZ0609	5190	2770	3570	2530	11900	5190	2770	3570
black crappie	whole-body	PCB054	4	4	100	46	113	FZ0609	71	53	72	46	113	71	53	72
black crappie	whole-body	PCB055	4	0	0							4.82 U	8.91 U	7.09	5.81 U	8.82 U
black crappie	whole-body	PCB056	4	4	100	683	3810	FZ0609	1530	730	895	683	3810	1530	730	895
black crappie	whole-body	PCB057	4	4	100	10.6	69.8	FZ0609	27.2	13.7	14.7 J	10.6	69.8	27.2	13.7	14.7 J
black crappie	whole-body	PCB058	4	3	75	13.5 J	32.2	FZ0609	19.8	13.6	13.6	10.9 U	32.2	17.6	13.5 J	13.6
black crappie	whole-body	PCB059 & 062 & 075	4	4	100	207 J	816 J	FZ0609	372	232 J	232 J	207 J	816 J	372	232 J	232 J
black crappie	whole-body	PCB060	4	4	100	528	2870	FZ0609	1140	531	641	528	2870	1140	531	641
black crappie	whole-body	PCB061 & 070 & 074 & 076	4	4	100	3630 J	20100 J	FZ0609	8320	3790 J	5750 J	3630 J	20100 J	8320	3790 J	5750 J
black crappie	whole-body	PCB063	4	4	100	116	784	FZ0609	308	136	194	116	784	308	136	194
black crappie	whole-body	PCB064	4	4	100	855	2960	FZ0609	1420	903	950	855	2960	1420	903	950
black crappie	whole-body	PCB066	4	4	100	2480	12900	FZ0609	5340	2570	3390	2480	12900	5340	2570	3390
black crappie	whole-body	PCB067	4	4	100	54.5	345	FZ0609	140	66	93.7	54.5	345	140	66	93.7
black crappie	whole-body	PCB068	4	4	100	22.9 J	151	FZ0609	65.5	34.1	53.9	22.9 J	151	65.5	34.1	53.9
black crappie	whole-body	PCB072	4	4	100	33.7	198	FZ0609	85.7	44.7	66.5	33.7	198	85.7	44.7	66.5
black crappie	whole-body	PCB073	4	0	0							5.8 U	11.6 U	8.8	6.29 U	11.5 U
black crappie	whole-body	PCB077	4	4	100	162	685	FZ0609	299	168	181	162	685	299	168	181
black crappie	whole-body	PCB078	4	1	25	130	130	FZ0609	130	130	130	4.12 U	130	37.3	7.55 U	7.63 U
black crappie	whole-body	PCB079	4	4	100	43	149	FZ0609	78.1	45.9	74.5	43	149	78.1	45.9	74.5
black crappie	whole-body	PCB080	4	0	0							5.59 U	11.2 U	8.49	6.06 U	11.1 U
black crappie	whole-body	PCB081	4	4	100	7.82	36	FZ0609	16.4	8.81	13	7.82	36	16.4	8.81	13
black crappie	whole-body	PCB082	4	4	100	241	802	FZ0609	429	333	338	241	802	429	333	338
black crappie	whole-body	PCB083 & 099	4	4	100	3620 J	11500 J	FZ0609	6180	3930 J	5680 J	3620 J	11500 J	6180	3930 J	5680 J
black crappie	whole-body	PCB084	4	4	100	402	1240	FZ0609	697	567	577	402	1240	697	567	577
black crappie	whole-body	PCB085 & 116 & 117	4	4	100	916 J	2690 J	FZ0609	1460	1030 J	1210 J	916 J	2690 J	1460	1030 J	1210 J
black crappie	whole-body	PCB086 & 087 & 097 & 108 & 119 & 125	4	4	100	2090 J	6990 J	FZ0609	3760	2470 J	3480 J	2090 J	6990 J	3760	2470 J	3480 J
black crappie	whole-body	PCB088 & 091	4	4	100	395 J	1530 J	FZ0609	787	552 J	669 J	395 J	1530 J	787	552 J	669 J

Table 4-7. Round 1 Summary Statistics of Chemical Concentrations in Black Crappie Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
black crappie	whole-body	PCB089	4	4	100	14.2 J	57.5	FZ0609	27.3	14.7	22.6	14.2 J	57.5	27.3	14.7	22.6
black crappie	whole-body	PCB090 & 101 & 113	4	4	100	4220 J	14500 J	FZ0609	7760	4850 J	7470 J	4220 J	14500 J	7760	4850 J	7470 J
black crappie	whole-body	PCB092	4	4	100	852	2840	FZ0609	1530	975	1470	852	2840	1530	975	1470
black crappie	whole-body	PCB093 & 095 & 098 & 100 & 102	4	4	100	1990 J	6880 J	FZ0609	3700	2710 J	3220 J	1990 J	6880 J	3700	2710 J	3220 J
black crappie	whole-body	PCB094	4	4	100	15.4 J	69.5	FZ0609	33.8	23.1	27.2	15.4 J	69.5	33.8	23.1	27.2
black crappie	whole-body	PCB096	4	4	100	14.5 J	60	FZ0609	30.3	21.6	25.2	14.5 J	60	30.3	21.6	25.2
black crappie	whole-body	PCB103	4	4	100	65.5	261	FZ0609	138	89.5	135	65.5	261	138	89.5	135
black crappie	whole-body	PCB104	4	1	25	8.36	8.36	FZ0609	8.36	8.36	8.36	7.38 U	13.7 U	10.7	8.36	13.5 U
black crappie	whole-body	PCB105	4	4	100	1920	4930	FZ0609	2790	2020	2270	1920	4930	2790	2020	2270
black crappie	whole-body	PCB106	4	0	0							8.95 U	18 U	13.6	9.71 U	17.8 U
black crappie	whole-body	PCB107 & 124	4	4	100	161 J	407 J	FZ0609	237	169 J	210 J	161 J	407 J	237	169 J	210 J
black crappie	whole-body	PCB109	4	4	100	435	1230	FZ0609	695	448	668	435	1230	695	448	668
black crappie	whole-body	PCB110 & 115	4	4	100	3330 J	8730 J	FZ0609	5160	4080 J	4500 J	3330 J	8730 J	5160	4080 J	4500 J
black crappie	whole-body	PCB111	4	3	75	9.24	14.1	FZ0609	11.3	10.5	10.5	9.24	14.1	11	10.3 U	10.5
black crappie	whole-body	PCB112	4	0	0							6.37 U	12.8 U	9.7	6.91 U	12.7 U
black crappie	whole-body	PCB114	4	4	100	130	359	FZ0609	195	133	157	130	359	195	133	157
black crappie	whole-body	PCB118	4	4	100	5140	12700	FZ0609	7380	5320	6370	5140	12700	7380	5320	6370
black crappie	whole-body	PCB120	4	4	100	33	84.3	FZ0609	52.4	40.4	52	33	84.3	52.4	40.4	52
black crappie	whole-body	PCB121	4	3	75	8.42 J	15.1	FZ0609	11.9	12.1	12.1	7.51 U	15.1	10.8	8.42 J	12.1
black crappie	whole-body	PCB122	4	4	100	39.1	135	FZ0609	70.8	53	56.2	39.1	135	70.8	53	56.2
black crappie	whole-body	PCB123	4	4	100	93.2	263	FZ0609	145	95.5	128	93.2	263	145	95.5	128
black crappie	whole-body	PCB126	4	4	100	13.1	25.3	FZ0609	17.5	13.9	17.7	13.1	25.3	17.5	13.9	17.7
black crappie	whole-body	PCB127	4	1	25	23.5	23.5	FZ0609	23.5	23.5	23.5	9.52 U	23.5	17	17.4 U	17.6 U
black crappie	whole-body	PCB128 & 166	4	4	100	903 J	2070 J	FZ0609	1270	951 J	1140 J	903 J	2070 J	1270	951 J	1140 J
black crappie	whole-body	PCB129 & 138 & 160 & 163	4	4	100	8210 J	20100 J	FZ0609	12600	8590 J	13400 J	8210 J	20100 J	12600	8590 J	13400 J
black crappie	whole-body	PCB130	4	4	100	452	968	FZ0609	645	483	677	452	968	645	483	677
black crappie	whole-body	PCB131	4	4	100	27.8 J	83	FZ0609	49.9	37 J	51.9	27.8 J	83	49.9	37 J	51.9
black crappie	whole-body	PCB132	4	4	100	875	2710	FZ0609	1500	1040	1390	875	2710	1500	1040	1390
black crappie	whole-body	PCB133	4	4	100	185	409	FZ0609	270	190	297	185	409	270	190	297
black crappie	whole-body	PCB134 & 143	4	2	50	133 J	189 J	FZ0306	161	133 J	133 J	9.6 U	189 J	85.5	10.4 U	133 J
black crappie	whole-body	PCB135 & 151 & 154	4	4	100	1790 J	5270 J	FZ0609	3030	1880 J	3190 J	1790 J	5270 J	3030	1880 J	3190 J
black crappie	whole-body	PCB136	4	4	100	265	963	FZ0609	512	342	477	265	963	512	342	477
black crappie	whole-body	PCB137	4	4	100	316	716	FZ0609	484	378	527	316	716	484	378	527
black crappie	whole-body	PCB139 & 140	4	4	100	117 J	277 J	FZ0609	175	119 J	186 J	117 J	277 J	175	119 J	186 J
black crappie	whole-body	PCB141	4	4	100	944	2920	FZ0609	1670	1060	1760	944	2920	1670	1060	1760
black crappie	whole-body	PCB142	4	0	0							5.52 U	11.1 U	8.4	5.99 U	11 U
black crappie	whole-body	PCB144	4	4	100	205	620	FZ0609	352	217	364	205	620	352	217	364
black crappie	whole-body	PCB145	4	1	25	2.71	2.71	FZ0609	2.71	2.71	2.71	2.35 U	4.35 U	3.43	2.71	4.31 U
black crappie	whole-body	PCB146	4	4	100	1680	3960	FZ0609	2700	2200	2940	1680	3960	2700	2200	2940
black crappie	whole-body	PCB147 & 149	4	4	100	3710 J	10600 J	FZ0609	6140	3800 J	6460 J	3710 J	10600 J	6140	3800 J	6460 J
black crappie	whole-body	PCB148	4	4	100	30.6	72.4	FZ0609	46.1	32	49.5	30.6	72.4	46.1	32	49.5
black crappie	whole-body	PCB150	4	4	100	9.91 J	41.3	FZ0609	22.2	14.5	22.9	9.91 J	41.3	22.2	14.5	22.9
black crappie	whole-body	PCB152	4	2	50	7.14	13.9	FZ0609	10.5	7.14	7.14	7.14	13.9	10.5	10.4 U	10.5 U
black crappie	whole-body	PCB153 & 168	4	4	100	8820 J	22700 J	FZ0609	14300	9980 J	15800 J	8820 J	22700 J	14300	9980 J	15800 J
black crappie	whole-body	PCB155	4	2	50	5.21	5.99	FZ0609	5.6	5.21	5.21	5.21	7.97 U	6.77	5.99	7.89 U
black crappie	whole-body	PCB156	4	4	100	512	1110	FZ0609	734	543	769	512	1110	734	543	769
black crappie	whole-body	PCB157	4	4	100	111	230	FZ0609	154	114	159	111	230	154	114	159
black crappie	whole-body	PCB158	4	4	100	717	1790	FZ0609	1100	747	1140	717	1790	1100	747	1140

Table 4-7. Round 1 Summary Statistics of Chemical Concentrations in Black Crappie Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
black crappie	whole-body	PCB159	4	4	100	41.7	103	FZ0609	63.4	45.8	60.2	41.7	103	63.4	45.8	60.2
black crappie	whole-body	PCB161	4	0	0							6.11 U	12.3 U	9.31	6.63 U	12.2 U
black crappie	whole-body	PCB162	4	4	100	29.3	38.3	FZ0609	33.8	30	37.5	29.3	38.3	33.8	30	37.5
black crappie	whole-body	PCB164	4	4	100	317	766	FZ0609	478	342	486	317	766	478	342	486
black crappie	whole-body	PCB165	4	2	50	14.2	16.6	FZ0609	15.4	14.2	14.2	10 U	16.6	12.7	10.1 U	14.2
black crappie	whole-body	PCB167	4	4	100	301	584	FZ0609	402	309	413	301	584	402	309	413
black crappie	whole-body	PCB169	4	3	75	0.818 J	1.05	FZ0306	0.936	0.94	0.94	0.818 J	1.05	0.934	0.926 U	0.94
black crappie	whole-body	PCB170	4	4	100	1480	3330	FZ0609	2090	1510	2040	1480	3330	2090	1510	2040
black crappie	whole-body	PCB171 & 173	4	4	100	508 J	1210 J	FZ0609	740	521 J	719 J	508 J	1210 J	740	521 J	719 J
black crappie	whole-body	PCB172	4	4	100	335	681	FZ0609	468	369	485	335	681	468	369	485
black crappie	whole-body	PCB174	4	4	100	859	2320	FZ0609	1350	888	1340	859	2320	1350	888	1340
black crappie	whole-body	PCB175	4	4	100	80.3	174	FZ0609	114	80.8	122	80.3	174	114	80.8	122
black crappie	whole-body	PCB176	4	4	100	106	277	FZ0609	165	107	170	106	277	165	107	170
black crappie	whole-body	PCB177	4	4	100	977	2310	FZ0609	1440	1010	1450	977	2310	1440	1010	1450
black crappie	whole-body	PCB178	4	4	100	486	1030	FZ0609	709	547	773	486	1030	709	547	773
black crappie	whole-body	PCB179	4	4	100	354	906	FZ0609	557	399	570	354	906	557	399	570
black crappie	whole-body	PCB180 & 193	4	4	100	4360 J	9420 J	FZ0609	6230	4500 J	6620 J	4360 J	9420 J	6230	4500 J	6620 J
black crappie	whole-body	PCB181	4	4	100	16.8	33	FZ0609	23.6	20.1	24.4	16.8	33	23.6	20.1	24.4
black crappie	whole-body	PCB182	4	4	100	23.1	38.3	FZ0609	29.1	26.2 J	28.6	23.1	38.3	29.1	26.2 J	28.6
black crappie	whole-body	PCB183 & 185	4	4	100	1450 J	3340 J	FZ0609	2140	1520 J	2260 J	1450 J	3340 J	2140	1520 J	2260 J
black crappie	whole-body	PCB184	4	0	0							6.46 U	13 U	9.84	7.01 U	12.9 U
black crappie	whole-body	PCB186	4	0	0							3.72 U	7.47 U	5.66	4.04 U	7.4 U
black crappie	whole-body	PCB187	4	4	100	3110	6600	FZ0609	4750	4100	5190	3110	6600	4750	4100	5190
black crappie	whole-body	PCB188	4	2	50	9.23	15	FZ0609	12.1	9.23	9.23	9.23	15	13.1	14 U	14.1 U
black crappie	whole-body	PCB189	4	4	100	56.8	107	FZ0609	74.3	63.9	69.3	56.8	107	74.3	63.9	69.3
black crappie	whole-body	PCB190	4	4	100	324	761	FZ0609	468	329	458	324	761	468	329	458
black crappie	whole-body	PCB191	4	4	100	74.4	159	FZ0609	103	78.1	99.9	74.4	159	103	78.1	99.9
black crappie	whole-body	PCB192	4	0	0							3.36 U	6.74 U	5.11	3.64 U	6.68 U
black crappie	whole-body	PCB194	4	4	100	521	899	FZ0609	683	560	752	521	899	683	560	752
black crappie	whole-body	PCB195	4	4	100	229	430	FZ0609	300	232	309	229	430	300	232	309
black crappie	whole-body	PCB196	4	4	100	336	627	FZ0609	452	341	505	336	627	452	341	505
black crappie	whole-body	PCB197 & 200	4	4	100	75.4 J	139	FZ0609	101	82.3 J	107 J	75.4 J	139	101	82.3 J	107 J
black crappie	whole-body	PCB198 & 199	4	4	100	794 J	1370	FZ0609	1070	914 J	1220 J	794 J	1370	1070	914 J	1220 J
black crappie	whole-body	PCB201	4	4	100	91.3	170	FZ0609	128	99.7	150	91.3	170	128	99.7	150
black crappie	whole-body	PCB202	4	4	100	189	355	FZ0609	272	205	338	189	355	272	205	338
black crappie	whole-body	PCB203	4	4	100	536	957	FZ0609	721	580	811	536	957	721	580	811
black crappie	whole-body	PCB204	4	0	0							8.88 U	17.8 U	13.5	9.63 U	17.7 U
black crappie	whole-body	PCB205	4	4	100	25.3	50.6	FZ0609	35.1	26	38.5	25.3	50.6	35.1	26	38.5
black crappie	whole-body	PCB206	4	4	100	188	313	FZ0609	250	217	281	188	313	250	217	281
black crappie	whole-body	PCB207	4	4	100	34	45.1	FZ0609	39.7	37.4	42.4	34	45.1	39.7	37.4	42.4
black crappie	whole-body	PCB208	4	4	100	90.1	102	FZ0609	96.5	94.5	99.4	90.1	102	96.5	94.5	99.4
black crappie	whole-body	PCB209	4	4	100	81.4	99.6	FZ0609	90	89.1	89.9	81.4	99.6	90	89.1	89.9
		Dioxins/Furans (pg/g)														
black crappie	whole-body	Tetrachlorodibenzo-p-dioxin	4	4	100	0.322	0.566	FZ0306	0.417	0.389	0.39	0.322	0.566	0.417	0.389	0.39
black crappie	whole-body	Pentachlorodibenzo-p-dioxin	4	4	100	0.498	1.04	FZ0306	0.671	0.547	0.6	0.498	1.04	0.671	0.547	0.6
black crappie	whole-body	Hexachlorodibenzo-p-dioxin	4	4	100	1.01	2.74	FZ0306	1.64	1.12	1.69	1.01	2.74	1.64	1.12	1.69
black crappie	whole-body	Heptachlorodibenzo-p-dioxin	4	4	100	0.879	6.52	FZ0306	2.71	1.55	1.89	0.879	6.52	2.71	1.55	1.89
black crappie	whole-body	Octachlorodibenzo-p-dioxin	4	1	25	1.21	1.21	FZ0609	1.21	1.21	1.21	0.364 U	1.21	0.65	0.468 U	0.556 U

Table 4-7. Round 1 Summary Statistics of Chemical Concentrations in Black Crappie Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
black crappie	whole-body	Tetrachlorodibenzofuran	4	4	100	1.88	2.35	FZ0609	2.14	2.09	2.25	1.88	2.35	2.14	2.09	2.25
black crappie	whole-body	Pentachlorodibenzofuran	4	4	100	1.24	1.87	FZ0609	1.53	1.27	1.73	1.24	1.87	1.53	1.27	1.73
black crappie	whole-body	Hexachlorodibenzofuran	4	4	100	0.681	1.51	FZ0609	1.07	1.02	1.06	0.681	1.51	1.07	1.02	1.06
black crappie	whole-body	Heptachlorodibenzofuran	4	4	100	0.093	0.22	FZ0609	0.171	0.163	0.207	0.093	0.22	0.171	0.163	0.207
black crappie	whole-body	Octachlorodibenzofuran	4	0	0							0.046 U	0.128 U	0.088	0.085 U	0.093 U
black crappie	whole-body	2,3,7,8-Tetrachlorodibenzo-p-dioxin	4	4	100	0.281	0.36	FZ0609	0.329	0.322	0.354	0.281	0.36	0.329	0.322	0.354
black crappie	whole-body	2,3,7,8-TCDD TEQ	4	4	100	3.86 T	6.52 T	FZ0609	4.61	3.98 T	4.08 T	3.86 T	6.52 T	4.61	3.98 T	4.08 T
black crappie	whole-body	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	4	4	100	0.426	0.518	FZ0306	0.472	0.458	0.485	0.426	0.518	0.472	0.458	0.485
black crappie	whole-body	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	4	4	100	0.115	0.172	FZ0306	0.136	0.127	0.129 J	0.115	0.172	0.136	0.127	0.129 J
black crappie	whole-body	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	4	4	100	0.635	1.37	FZ0609	0.885	0.693	0.841	0.635	1.37	0.885	0.693	0.841
black crappie	whole-body	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	4	4	100	0.08	0.111	FZ0306	0.0903	0.081	0.089	0.08	0.111	0.0903	0.081	0.089
black crappie	whole-body	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	4	4	100	0.447	1.33	FZ0609	0.754	0.589	0.65	0.447	1.33	0.754	0.589	0.65
black crappie	whole-body	2,3,7,8-Tetrachlorodibenzofuran	4	4	100	1.29	1.48	FZ0609	1.38	1.3	1.45	1.29	1.48	1.38	1.3	1.45
black crappie	whole-body	1,2,3,7,8-Pentachlorodibenzofuran	4	4	100	0.269	0.37	FZ0306	0.317	0.276	0.352	0.269	0.37	0.317	0.276	0.352
black crappie	whole-body	2,3,4,7,8-Pentachlorodibenzofuran	4	4	100	0.239	0.32	FZ0609	0.275	0.261	0.279	0.239	0.32	0.275	0.261	0.279
black crappie	whole-body	1,2,3,4,7,8-Hexachlorodibenzofuran	4	4	100	0.119	0.186	FZ0609	0.155	0.15	0.164	0.119	0.186	0.155	0.15	0.164
black crappie	whole-body	1,2,3,6,7,8-Hexachlorodibenzofuran	4	4	100	0.074	0.09	FZ0306	0.0818	0.079	0.084	0.074	0.09	0.0818	0.079	0.084
black crappie	whole-body	1,2,3,7,8,9-Hexachlorodibenzofuran	4	1	25	0.022 J	0.022 J	FZ0306	0.022	0.022 J	0.022 J	0.011 U	0.022 J	0.0138	0.011 U	0.011 U
black crappie	whole-body	2,3,4,6,7,8-Hexachlorodibenzofuran	4	4	100	0.028 J	0.053	FZ0306	0.0423	0.039	0.049	0.028 J	0.053	0.0423	0.039	0.049
black crappie	whole-body	1,2,3,4,6,7,8-Heptachlorodibenzofuran	4	4	100	0.093	0.207	FZ0306	0.136	0.094	0.148	0.093	0.207	0.136	0.094	0.148
black crappie	whole-body	1,2,3,4,7,8,9-Heptachlorodibenzofuran	4	1	25	0.023 J	0.023 J	FZ0306	0.023	0.023 J	0.023 J	0.016 U	0.023 J	0.0178	0.016 U	0.016 U

Notes:

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value	UJ	Combined qualifier
JT	Combined qualifier	UJT	Combined qualifier
N	Analyte tentatively identified	UT	Combined qualifier
NJ	Combined qualifier		
NJT	Combined qualifier		
NT	Combined qualifier		
T	Result derived or selected from more than one reported value		
U	Analyte was not detected		

Table 4-8. Round 1 Summary Statistics of Chemical Concentrations in Carp Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
		Conventionals (percent)														
carp	fillet	Total solids	6	6	100	22.8	26.5	FZ0306	24	23.6 T	24.2	22.8	26.5	24	23.6 T	24.2
carp	whole-body	Total solids	6	6	100	28	33.5	FZ0609	29.5	28.7 T	29.6	28	33.5	29.5	28.7 T	29.6
carp	fillet	Lipids	6	6	100	3.3 T	8 T	FZ0306	4.63	4.27 T	4.5 T	3.3 T	8 T	4.63	4.27 T	4.5 T
carp	whole-body	Lipids	6	6	100	5.6 T	13 T	FZ0609	7.88	6.9 T	8 T	5.6 T	13 T	7.88	6.9 T	8 T
		Metals (mg/kg)														
carp	fillet	Aluminum	6	6	100	1.16 J	2.68 J	FZ0306	1.75	1.65 J	1.97 JT	1.16 J	2.68 J	1.75	1.65 J	1.97 JT
carp	whole-body	Aluminum	6	6	100	52.9 T	134	FZ0306	96.8	98.8	111	52.9 T	134	96.8	98.8	111
carp	fillet	Antimony	6	0	0							0.001 U	0.001 U	0.001	0.001 U	0.001 UT
carp	whole-body	Antimony	6	0	0							0.001 UT	0.004 U	0.00233	0.002 U	0.003 U
carp	fillet	Arsenic	6	6	100	0.05 J	0.16	FZ0306	0.0967	0.08 JT	0.12 J	0.05 J	0.16	0.0967	0.08 JT	0.12 J
carp	whole-body	Arsenic	6	6	100	0.125 JT	0.22	FZ0306	0.166	0.14 J	0.21	0.125 JT	0.22	0.166	0.14 J	0.21
carp	fillet	Cadmium	6	6	100	0.002 J	0.009 J	FZ0609	0.00425	0.0035 JT	0.005 J	0.002 J	0.009 J	0.00425	0.0035 JT	0.005 J
carp	whole-body	Cadmium	6	6	100	0.048	0.108	FZ0306	0.0688	0.061	0.0705 T	0.048	0.108	0.0688	0.061	0.0705 T
carp	fillet	Chromium	6	3	50	0.12 J	1.49	FZ0306	0.603	0.2	0.2	0.07 U	1.49	0.337	0.07 U	0.2
carp	whole-body	Chromium	6	6	100	0.305 T	2.02	FZ0306	1.09	0.86	1.37	0.305 T	2.02	1.09	0.86	1.37
carp	fillet	Copper	6	6	100	0.313	0.497	FZ0609	0.401	0.376	0.458	0.313	0.497	0.401	0.376	0.458
carp	whole-body	Copper	6	6	100	1.04	1.42	FZ0306	1.16	1.05 T	1.28	1.04	1.42	1.16	1.05 T	1.28
carp	fillet	Lead	6	2	33.3	0.012	0.057	FZ0609	0.0345	0.012	0.012	0.004 U	0.057	0.0148	0.004 U	0.012
carp	whole-body	Lead	6	6	100	0.121 J	0.202 J	FZ0609	0.151	0.133 JT	0.17 J	0.121 J	0.202 J	0.151	0.133 JT	0.17 J
carp	fillet	Manganese	6	6	100	0.191 T	0.379	FZ0306	0.278	0.228	0.344	0.191 T	0.379	0.278	0.228	0.344
carp	whole-body	Manganese	6	6	100	4.65	8.53	FZ0306	6.22	5.28 T	7.91	4.65	8.53	6.22	5.28 T	7.91
carp	fillet without skin	Mercury	6	6	100	0.074	0.191 T	FZ0306	0.127	0.098	0.185	0.074	0.191 T	0.127	0.098	0.185
carp	whole-body	Mercury	7	7	100	0.029	0.047 T	FZ0609	0.0405	0.042	0.0445 T	0.029	0.047 T	0.0405	0.042	0.0445 T
carp	fillet	Nickel	6	5	83.3	0.012 J	0.087	FZ0306	0.0438	0.04 J	0.057 T	0.002 U	0.087	0.0368	0.023 J	0.057 T
carp	whole-body	Nickel	6	6	100	0.401 JT	1.37 J	FZ0306	0.745	0.569 J	0.834 J	0.401 JT	1.37 J	0.745	0.569 J	0.834 J
carp	fillet	Selenium	6	0	0							0.3 U	0.5 U	0.35	0.3 U	0.4 U
carp	whole-body	Selenium	6	6	100	0.3	0.4	FZ0609	0.317	0.3	0.3 T	0.3	0.4	0.317	0.3	0.3 T
carp	fillet	Silver	6	0	0							0.0002 U	0.0003 U	0.000217	0.0002 U	0.0002 U
carp	whole-body	Silver	6	4	66.7	0.0102	0.0165	FZ0609	0.0136	0.0128	0.0149	0.0052 U	0.0165	0.0108	0.0102	0.0149
carp	fillet	Thallium	6	6	100	0.00075 JT	0.0034 J	FZ0609	0.00208	0.0021 J	0.0028 J	0.00075 JT	0.0034 J	0.00208	0.0021 J	0.0028 J
carp	whole-body	Thallium	6	6	100	0.00125 JT	0.0049 J	FZ0306	0.00288	0.002 J	0.0038 J	0.00125 JT	0.0049 J	0.00288	0.002 J	0.0038 J
carp	fillet	Zinc	6	6	100	17.4 J	29.8 J	FZ0306	23.3	23.8 J	24.6 JT	17.4 J	29.8 J	23.3	23.8 J	24.6 JT
carp	whole-body	Zinc	6	6	100	87.1	112	FZ0609	99.3	96.7	110 T	87.1	112	99.3	96.7	110 T
		PCB Aroclors (ug/kg)														
carp	fillet	Aroclor 1016	6	0	0							3.8 U	41 U	24.6	23 U	38 U
carp	whole-body	Aroclor 1016	6	0	0							9.5 U	470 U	104	38 U	53 U
carp	fillet	Aroclor 1242	6	0	0							3.8 U	57 UJ	28.9	33 UJ	38 U
carp	whole-body	Aroclor 1242	6	0	0							9.5 U	630 UJ	138	38 U	76 U
carp	fillet	Aroclor 1248	6	4	66.7	110	410	FZ0306	215	160	180	110	410	205	180	190 UJ
carp	whole-body	Aroclor 1248	6	3	50	60	270	FZ0609	147	110	110	60	730 UJ	252	160 U	270
carp	fillet	Aroclor 1254	6	0	0							200 U	760 U	480	470 U	690 UJ
carp	whole-body	Aroclor 1254	6	0	0							140 U	5200 UJ	1230	510 U	750 U
carp	fillet	Aroclor 1260	6	6	100	230 J	1200 J	FZ0609	668	490	1200 J	230 J	1200 J	668	490	1200 J
carp	whole-body	Aroclor 1260	6	6	100	170	6500 J	FZ0306	1570	690	1100	170	6500 J	1570	690	1100
carp	fillet	Aroclor 1262	6	0	0							3.8 U	38 U	23.3	19 UJ	38 U

Table 4-8. Round 1 Summary Statistics of Chemical Concentrations in Carp Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
carp	whole-body	Aroclor 1262	6	0	0							9.5 U	190 UJ	50.7	19 U	38 U
carp	fillet	Aroclor 1268	6	0	0							3.8 U	38 U	23.3	19 UJ	38 U
carp	whole-body	Aroclor 1268	6	0	0							9.5 U	190 UJ	50.7	19 U	38 U
carp	fillet	Aroclor 1221	6	0	0							3.8 U	38 U	23.3	19 U	38 U
carp	whole-body	Aroclor 1221	6	0	0							9.5 U	390 U	101	38 U	80 U
carp	fillet	Aroclor 1232	6	0	0							3.8 U	84 U	37.1	38 U	55 U
carp	whole-body	Aroclor 1232	6	0	0							9.5 U	550 U	131	38 U	110 U
carp	fillet	Total PCB Aroclors	6	6	100	350 T	1200 JT	FZ0609	812	670 T	1200 JT	350 T	1200 JT	812	670 T	1200 JT
carp	whole-body	Total PCB Aroclors	6	6	100	230 T	6500 JT	FZ0306	1640	690 T	1100 T	230 T	6500 JT	1640	690 T	1100 T
		Organochlorine Pesticides (ug/kg)														
carp	fillet	2,4'-DDD	6	2	33.3	11 JT	16 JT	FZ0609	13.5	11 JT	11 JT	8.6 UT	16 JT	10.4	8.6 UT	11 JT
carp	whole-body	2,4'-DDD	6	3	50	19 NJ	81.5 JT	FZ0306	40.4	20.8 JT	20.8 JT	8.6 UT	81.5 JT	24.5	8.6 UT	20.8 JT
carp	fillet	2,4'-DDE	6	0	0							4 UJT	7.5 UT	5.17	4 UT	7.5 UT
carp	whole-body	2,4'-DDE	6	0	0							1 U	7.5 UT	4.33	4 UJT	7.5 UT
carp	fillet	2,4'-DDT	6	1	16.7	24 N	24 N	FZ0306	24	24 N	24 N	6.9 UT	24 N	9.75	6.9 UT	6.9 UT
carp	whole-body	2,4'-DDT	6	1	16.7	23 NJ	23 NJ	FZ0306	23	23 NJ	23 NJ	6.9 UT	23 NJ	9.58	6.9 UT	6.9 UT
carp	fillet	4,4'-DDD	6	6	100	23 NJ	63.5 T	FZ0609	38	33.5 JT	43.5 JT	23 NJ	63.5 T	38	33.5 JT	43.5 JT
carp	whole-body	4,4'-DDD	6	6	100	22.6 JT	89.5 JT	FZ0306	46.4	38 JT	57.5 JT	22.6 JT	89.5 JT	46.4	38 JT	57.5 JT
carp	fillet	4,4'-DDE	6	6	100	73 JT	135 JT	FZ0306	94.8	87 J	98.5 JT	73 JT	135 JT	94.8	87 J	98.5 JT
carp	whole-body	4,4'-DDE	6	6	100	81 J	260 JT	FZ0306	135	105 JT	145 T	81 J	260 JT	135	105 JT	145 T
carp	fillet	4,4'-DDT	6	1	16.7	39 NJ	39 NJ	FZ0306	39	39 NJ	39 NJ	6.3 UT	39 NJ	11.8	6.3 UT	6.3 UT
carp	whole-body	4,4'-DDT	6	1	16.7	24 J	24 J	FZ0306	24	24 J	24 J	6.3 UT	24 J	9.25	6.3 UT	6.3 UT
carp	fillet	Total of 3 isomers: pp-DDT,-DDD,-DDE	6	6	100	99.5 JT	173 JT	FZ0306	139	132 JT	155 T	99.5 JT	173 JT	139	132 JT	155 T
carp	whole-body	Total of 3 isomers: pp-DDT,-DDD,-DDE	6	6	100	132 JT	350 JT	FZ0306	186	143 JT	188 JT	132 JT	350 JT	186	143 JT	188 JT
carp	fillet	Aldrin	6	0	0							4 UT	13 UT	6.47	4 UT	9.8 UT
carp	whole-body	Aldrin	6	0	0							1 U	13 UT	5.48	4 UT	9.9 UT
carp	fillet	alpha-Hexachlorocyclohexane	6	0	0							4 UT	6.4 UT	4.8	4 UT	6.4 UT
carp	whole-body	alpha-Hexachlorocyclohexane	6	0	0							1 U	6.4 UT	3.8	4 UT	6.4 UT
carp	fillet	beta-Hexachlorocyclohexane	6	0	0							4 UJT	8.5 UT	5.82	4 UT	8.5 UT
carp	whole-body	beta-Hexachlorocyclohexane	6	0	0							1.5 UJ	8.5 UT	5.27	4 UT	8.5 UT
carp	fillet	delta-Hexachlorocyclohexane	6	0	0							4 UT	7.3 UT	5.1	4 UJT	7.3 UT
carp	whole-body	delta-Hexachlorocyclohexane	6	0	0							1 U	7.3 UT	4.1	4 UT	7.3 UT
carp	fillet	gamma-Hexachlorocyclohexane	6	0	0							4 UJT	9.6 UT	5.87	4 UJT	9.6 UT
carp	whole-body	gamma-Hexachlorocyclohexane	6	0	0							1 U	9.6 UT	5.92	4 UT	9.6 UT
carp	fillet	cis-Chlordane	6	1	16.7	4.3 NJ	4.3 NJ	FZ0306	4.3	4.3 NJ	4.3 NJ	4 UJ	20 UJ	7.68	4 U	9.8 U
carp	whole-body	cis-Chlordane	6	3	50	2.8 NJ	8.3 N	FZ0609	4.77	3.2 NJ	3.2 NJ	2.8 NJ	20 U	8.03	4 U	9.9 U
carp	fillet	trans-Chlordane	6	0	0							4 UT	8.4 UT	5.47	4 UT	8.4 UT
carp	whole-body	trans-Chlordane	6	0	0							1 UJ	8.4 UT	5.2	4 UT	8.4 UT
carp	fillet	Oxychlordane	6	0	0							4 UT	20 UT	7.63	4 UT	9.8 UT
carp	whole-body	Oxychlordane	6	1	16.7	1.1 NJ	1.1 NJ	FZ0306	1.1	1.1 NJ	1.1 NJ	1 UT	20 UT	6.67	4 UT	9.9 UT
carp	fillet	cis-Nonachlor	6	0	0							7.1 UT	17 U	8.75	7.1 UT	7.1 UT
carp	whole-body	cis-Nonachlor	6	0	0							7.1 UT	17 U	8.75	7.1 UT	7.1 UT
carp	fillet	trans-Nonachlor	6	0	0							4 U	11 UT	7.68	6.3 UT	11 UT
carp	whole-body	trans-Nonachlor	6	1	16.7	10 NJ	10 NJ	FZ0306	10	10 NJ	10 NJ	4.8 UT	11 UT	9.62	10 NJ	11 UT
carp	fillet	Dieldrin	6	0	0							4 UJ	14 UT	7.38	5.3 UJT	9.8 UT
carp	whole-body	Dieldrin	6	0	0							1 UJ	14 UT	6.72	5.2 UT	9.9 UT

Table 4-8. Round 1 Summary Statistics of Chemical Concentrations in Carp Tissue.

Species	Tissue Type	Analyte	N	N Detected	% Detected	Detected Concentrations Minimum	Maximum	Location	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th UCL
carp	fillet	alpha-Endosulfan	6	1	16.7	4.1 NJ	4.1 NJ	FZ0306	4.1	4.1 NJ	4.1 NJ	4 U	20 U	7.65	4 U	9.8 U
carp	whole-body	alpha-Endosulfan	6	1	16.7	3.6 NJ	3.6 NJ	FZ0609	3.6	3.6 NJ	3.6 NJ	1 U	20 UJ	5.63	3.6 NJ	4 U
carp	fillet	beta-Endosulfan	6	0	0							4 UJT	15 UT	6.8	4 UT	9.8 UT
carp	whole-body	beta-Endosulfan	6	0	0							1 UJ	15 UT	10.3	9.9 UT	15 UT
carp	fillet	Endosulfan sulfate	6	0	0							4 UJT	12 UT	6.3	4 UT	9.8 UT
carp	whole-body	Endosulfan sulfate	6	0	0							1 UJ	12 UT	5.32	4 UT	9.9 UT
carp	fillet	Endrin	6	0	0							4 UJT	31 UJT	12.1	4 UT	20 UJT
carp	whole-body	Endrin	6	0	0							1 UJ	20 UT	6.65	4 UT	9.9 UT
carp	fillet	Endrin aldehyde	6	0	0							4 UJT	8.5 UT	5.5	4 UT	8.5 UT
carp	whole-body	Endrin aldehyde	6	0	0							1.8 UJT	8.5 UT	4.8	4 UT	8.5 UT
carp	fillet	Endrin ketone	6	0	0							4 UJT	7.5 UT	5.17	4 UT	7.5 UT
carp	whole-body	Endrin ketone	6	0	0							1 UJ	7.5 UT	4.17	4 UT	7.5 UT
carp	fillet	Heptachlor	6	0	0							4 UT	13 UT	6.47	4 UT	9.8 UT
carp	whole-body	Heptachlor	6	0	0							1 UT	13 UT	5.5	4 UT	9.9 UT
carp	fillet	Heptachlor epoxide	6	0	0							4 UT	8 UT	5.33	4 UJT	8 UT
carp	whole-body	Heptachlor epoxide	6	0	0							1 U	8 UT	4.33	4 UT	8 UT
carp	fillet	Methoxychlor	6	1	16.7	7.2 NJ	7.2 NJ	FZ0306	7.2	7.2 NJ	7.2 NJ	4 UT	7.2 NJ	4.93	4.8 UT	4.8 UT
carp	whole-body	Methoxychlor	6	1	16.7	4.2 N	4.2 N	FZ0306	4.2	4.2 N	4.2 N	4 UT	4.8 UT	4.57	4.8 UT	4.8 UT
carp	fillet	Mirex	6	0	0							4 UJ	6.2 UT	5.1	4 UT	6.2 UT
carp	whole-body	Mirex	6	0	0							1 UJ	6.2 UT	3.73	4 UT	6.2 UT
carp	fillet	Toxaphene	6	0	0							580 UJ	2600 UJ	1290	680 UJ	2500 UJ
carp	whole-body	Toxaphene	6	0	0							420 UJ	6900 U	2050	700 UJ	2500 U
		Semivolatile Organic Compounds (ug/kg)														
carp	whole-body	1,2,4-Trichlorobenzene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	1,2-Dichlorobenzene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	1,2-Diphenylhydrazine	6	0	0							31 U	33 U	32.2	32 U	33 U
carp	whole-body	1,3-Dichlorobenzene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	1,4-Dichlorobenzene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Azobenzene	6	0	0							310 U	330 U	322	320 U	330 U
carp	whole-body	Bis(2-chloro-1-methylethyl) ether	6	0	0							310 U	330 U	322	320 U	330 U
carp	whole-body	2,4-Dinitrotoluene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	2,6-Dinitrotoluene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	2-Chloronaphthalene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	2-Nitroaniline	6	0	0							1600 U	1600 U	1600	1600 U	1600 U
carp	whole-body	3,3'-Dichlorobenzidine	6	0	0							3100 U	3300 U	3220	3200 U	3300 U
carp	whole-body	3-Nitroaniline	6	0	0							1600 U	1600 U	1600	1600 U	1600 U
carp	whole-body	4-Bromophenyl phenyl ether	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	4-Chloroaniline	6	0	0							160 UT	160 UT	160	160 UT	160 UT
carp	whole-body	4-Chlorophenyl phenyl ether	6	0	0							78 UT	82 UT	80.3	80 UT	81 UT
carp	whole-body	4-Nitroaniline	6	0	0							1600 U	1600 U	1600	1600 U	1600 U
carp	whole-body	Aniline	5	0	0							1600 U	1700 U	1660	1700 U	1700 U
carp	whole-body	Benzoic acid	6	0	0							8200 U	8300 U	8270	8300 U	8300 U
carp	whole-body	Benzyl alcohol	6	0	0							620 U	660 U	643	640 U	650 UT
carp	whole-body	Bis(2-chloroethoxy) methane	6	0	0							310 U	330 U	322	320 U	330 U
carp	whole-body	Bis(2-chloroethyl) ether	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Carbazole	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT

Table 4-8. Round 1 Summary Statistics of Chemical Concentrations in Carp Tissue.

Species	Tissue Type	Analyte	N	N Detected	% Detected	Detected Concentrations Minimum	Maximum	Location	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th UCL
carp	whole-body	Dibenzofuran	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	fillet	Hexachlorobenzene	6	2	33.3	4.2 NT	140 T	FZ0609	72.1	4.2 NT	4.2 NT	4 UT	140 T	27.1	4 UT	6.4 UT
carp	whole-body	Hexachlorobenzene	6	0	0							4 UT	32 UT	10.3	6.4 UT	6.4 UT
carp	fillet	Hexachlorobutadiene	6	0	0							4 UJT	4.6 UT	4.2	4 UT	4.6 UT
carp	whole-body	Hexachlorobutadiene	6	0	0							1 UJT	4.6 UT	3.9	4.6 UT	4.6 UT
carp	whole-body	Hexachlorocyclopentadiene	6	0	0							1600 U	1600 U	1600	1600 U	1600 U
carp	fillet	Hexachloroethane	6	0	0							4 UJT	13 UT	7	4 UJT	13 UT
carp	whole-body	Hexachloroethane	6	0	0							2 UJT	13 UT	10.7	13 UT	13 UT
carp	whole-body	Isophorone	6	0	0							1600 U	1700 U	1670	1700 U	1700 U
carp	whole-body	Nitrobenzene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	N-Nitrosodimethylamine	6	0	0							160 UJT	160 UJT	160	160 UJT	160 UJT
carp	whole-body	N-Nitrosodipropylamine	6	0	0							31 UJT	33 UJT	32.2	32 UJT	33 UJT
carp	whole-body	N-Nitrosodiphenylamine	6	0	0							310 U	330 U	322	320 U	330 U
		Phenols (ug/kg)														
carp	whole-body	2,4,5-Trichlorophenol	6	0	0							1600 U	1600 U	1600	1600 U	1600 U
carp	whole-body	2,4,6-Trichlorophenol	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	2,4-Dichlorophenol	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	2,4-Dimethylphenol	6	0	0							940 U	990 U	967	960 U	980 U
carp	whole-body	2,4-Dinitrophenol	6	0	0							6200 U	6600 U	6430	6400 U	6500 U
carp	whole-body	2-Chlorophenol	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	2-Methylphenol	6	0	0							310 U	330 U	322	320 U	330 U
carp	whole-body	2-Nitrophenol	6	0	0							1600 U	1700 U	1670	1700 U	1700 U
carp	whole-body	4,6-Dinitro-2-methylphenol	6	0	0							6200 U	6600 U	6430	6400 U	6500 U
carp	whole-body	4-Chloro-3-methylphenol	6	0	0							620 U	660 U	643	640 U	650 U
carp	whole-body	4-Methylphenol	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	4-Nitrophenol	6	0	0							3100 U	3300 U	3220	3200 U	3300 U
carp	whole-body	Pentachlorophenol	6	0	0							160 UT	160 UT	160	160 UT	160 UT
carp	whole-body	Phenol	6	0	0							620 U	660 U	643	640 U	650 U
carp	whole-body	2,3,4,5-Tetrachlorophenol	6	0	0							3100 U	3300 U	3220	3200 U	3300 U
carp	whole-body	2,3,5,6-Tetrachlorophenol	6	0	0							3100 U	3300 U	3220	3200 U	3300 U
		Phthalates (ug/kg)														
carp	whole-body	Dimethyl phthalate	6	0	0							310 U	330 U	322	320 U	330 U
carp	whole-body	Diethyl phthalate	6	0	0							310 U	330 U	322	320 U	330 U
carp	whole-body	Dibutyl phthalate	6	0	0							620 U	660 U	643	640 U	650 U
carp	whole-body	Butylbenzyl phthalate	6	0	0							620 U	660 U	643	640 U	650 U
carp	whole-body	Di-n-octyl phthalate	6	0	0							620 U	660 U	643	640 U	650 U
carp	whole-body	Bis(2-ethylhexyl) phthalate	6	0	0							94 UT	99 UT	96.7	96 UT	98 UT
		PAHs (ug/kg)														
carp	whole-body	2-Methylnaphthalene	6	1	16.7	38 T	38 T	FZ0609	38	38 T	38 T	32 UT	38 T	33.3	32 UT	33 UT
carp	whole-body	Acenaphthene	6	2	33.3	65 T	75 T	FZ0609	70	65 T	65 T	32 UT	75 T	44.8	32 UT	65 T
carp	whole-body	Acenaphthylene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Anthracene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Fluorene	6	1	16.7	53 T	53 T	FZ0609	53	53 T	53 T	32 UT	53 T	35.8	32 UT	33 UT
carp	whole-body	Naphthalene	6	2	33.3	46 T	56 JT	FZ0609	51	46 T	46 T	32 UT	56 JT	38.5	32 UT	46 T
carp	whole-body	Phenanthrene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Low Molecular Weight PAH	6	2	33.3	111 T	222 JT	FZ0609	167	111 T	111 T	32 UT	222 JT	77	32 UT	111 T

Table 4-8. Round 1 Summary Statistics of Chemical Concentrations in Carp Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
carp	whole-body	Dibenz(a,h)anthracene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Benz(a)anthracene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Benzo(a)pyrene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Benzo(b)fluoranthene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Benzo(g,h,i)perylene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Benzo(k)fluoranthene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Chrysene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Fluoranthene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Indeno(1,2,3-cd)pyrene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Pyrene	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	High Molecular Weight PAH	6	0	0							31 UT	33 UT	32.2	32 UT	33 UT
carp	whole-body	Polycyclic Aromatic Hydrocarbons	6	2	33.3	111 T	222 JT	FZ0609	167	111 T	111 T	32 UT	222 JT	77	32 UT	111 T
		PCB Congeners (pg/g)														
carp	whole-body	PCB001	5	5	100	2.78	32.1	FZ0306	10.3	5.09 J	7.06	2.78	32.1	10.3	5.09 J	7.06
carp	whole-body	PCB002	5	5	100	1.63	4.71 J	FZ0306	3	2.8	3.26	1.63	4.71 J	3	2.8	3.26
carp	whole-body	PCB003	5	5	100	1.75 J	17.8	FZ0306	6.18	2.96 J	5.59 J	1.75 J	17.8	6.18	2.96 J	5.59 J
carp	whole-body	PCB004	6	6	100	125	5520	FZ0306	1090	206	288	125	5520	1090	206	288
carp	whole-body	PCB005	6	3	50	2.76	3.87	FZ0306	3.21	3	3	2.27 U	4.1 U	3.07	2.76	3.87
carp	whole-body	PCB006	6	6	100	20.5	224	FZ0306	80.9	53.9	81	20.5	224	80.9	53.9	81
carp	whole-body	PCB007	6	5	83.3	5.91	59	FZ0306	18.5	9.2	10.2	3.82 U	59	16	8.04	10.2
carp	whole-body	PCB008	6	6	100	90.2	1060	FZ0306	369	243	374	90.2	1060	369	243	374
carp	whole-body	PCB009	6	6	100	6.45 J	190	FZ0306	50.4	23.2	36.4	6.45 J	190	50.4	23.2	36.4
carp	whole-body	PCB010	6	6	100	7.61	580	FZ0306	109	15.5	21.8	7.61	580	109	15.5	21.8
carp	whole-body	PCB011	6	6	100	184	533	FZ0609	279	250	258	184	533	279	250	258
carp	whole-body	PCB012 & 013	6	4	66.7	7.25 J	248 J	FZ0306	72.4	15.7 J	18.6 J	5.39 U	248 J	50.7	9.18 U	18.6 J
carp	whole-body	PCB014	6	0	0							0.553 U	5.39 U	3.07	3.13 U	3.18 U
carp	whole-body	PCB015	6	6	100	20.3	92.9	FZ0306	50.4	29	72	20.3	92.9	50.4	29	72
carp	whole-body	PCB016	6	6	100	150	464	FZ0306	290	209	428	150	464	290	209	428
carp	whole-body	PCB017	6	6	100	231	14800	FZ0306	2930	588	758	231	14800	2930	588	758
carp	whole-body	PCB018 & 030	6	6	100	547 J	6750 J	FZ0306	2000	962 J	1820 J	547 J	6750 J	2000	962 J	1820 J
carp	whole-body	PCB019	6	6	100	230	33300	FZ0306	6050	522	1320	230	33300	6050	522	1320
carp	whole-body	PCB020 & 028	6	6	100	1970 J	10700 J	FZ0306	4590	2590 J	6000 J	1970 J	10700 J	4590	2590 J	6000 J
carp	whole-body	PCB021 & 033	6	6	100	361 J	1970 J	FZ0306	873	578 J	1020 J	361 J	1970 J	873	578 J	1020 J
carp	whole-body	PCB022	6	6	100	391	1250	FZ0306	778	567	1060	391	1250	778	567	1060
carp	whole-body	PCB023	6	3	50	2.03	8.18 J	FZ0306	5.21	5.41	5.41	2.03	8.18 J	4.99	3.92 U	6.67 U
carp	whole-body	PCB024	6	4	66.7	6.73	27	FZ0306	16	14.5	15.8	4.78 U	27	12.3	6.73	15.8
carp	whole-body	PCB025	6	6	100	108	5290	FZ0306	1100	288	366	108	5290	1100	288	366
carp	whole-body	PCB026 & 029	6	6	100	285 J	5950 J	FZ0306	1470	519 J	935 J	285 J	5950 J	1470	519 J	935 J
carp	whole-body	PCB027	6	6	100	82.5	18900	FZ0306	3390	285	544	82.5	18900	3390	285	544
carp	whole-body	PCB031	6	6	100	1330	6610	FZ0306	2980	1730	3920	1330	6610	2980	1730	3920
carp	whole-body	PCB032	6	6	100	247	21000	FZ0306	4020	567	999	247	21000	4020	567	999
carp	whole-body	PCB034	6	6	100	9.61 J	72.1	FZ0306	26.4	14.8	29.2	9.61 J	72.1	26.4	14.8	29.2
carp	whole-body	PCB035	6	1	16.7	3.2	3.2	FZ0306	3.2	3.2	3.2	0.745 U	4.02 U	2.49	2.34 U	3.2
carp	whole-body	PCB036	6	0	0							0.684 U	6.75 U	3.84	3.92 U	3.99 U
carp	whole-body	PCB037	6	6	100	71.2	178	FZ0306	120	88	172	71.2	178	120	88	172
carp	whole-body	PCB038	6	5	83.3	1.3 J	59.3	FZ0306	15.8	6.4	8.2	1.3 J	59.3	13.7	3.75	8.2

Table 4-8. Round 1 Summary Statistics of Chemical Concentrations in Carp Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
carp	whole-body	PCB039	6	6	100	11.9	65.9	FZ0306	27.7	17.8	30.7	11.9	65.9	27.7	17.8	30.7
carp	whole-body	PCB040 & 041 & 071	6	6	100	1570 J	25000 J	FZ0306	6010	2150 J	3150 J	1570 J	25000 J	6010	2150 J	3150 J
carp	whole-body	PCB042	6	6	100	945	5220	FZ0306	1870	1210	1530	945	5220	1870	1210	1530
carp	whole-body	PCB043	6	6	100	135	1140	FZ0306	389	221	422	135	1140	389	221	422
carp	whole-body	PCB044 & 047 & 065	6	6	100	5220 J	195000 J	FZ0306	40700	8980 J	17000 J	5220 J	195000 J	40700	8980 J	17000 J
carp	whole-body	PCB045 & 051	6	6	100	558 J	36500 J	FZ0306	7300	1200 J	2970 J	558 J	36500 J	7300	1200 J	2970 J
carp	whole-body	PCB046	6	6	100	76.2	2570	FZ0306	546	125	239	76.2	2570	546	125	239
carp	whole-body	PCB048	6	6	100	520	2500	FZ0306	1010	633	1060	520	2500	1010	633	1060
carp	whole-body	PCB049 & 069	6	6	100	3870 J	93600 J	FZ0306	21300	6430 J	10600 J	3870 J	93600 J	21300	6430 J	10600 J
carp	whole-body	PCB050 & 053	6	6	100	559 J	104000 J	FZ0306	19000	1600 J	5160 J	559 J	104000 J	19000	1600 J	5160 J
carp	whole-body	PCB052	6	6	100	6210	150000	FZ0306	34000	11000	17500	6210	150000	34000	11000	17500
carp	whole-body	PCB054	6	6	100	67.6	27200	FZ0306	4770	181	888	67.6	27200	4770	181	888
carp	whole-body	PCB055	6	0	0							4.57 U	11 U	6.36	4.86 U	8.27 U
carp	whole-body	PCB056	6	6	100	1160	2750	FZ0306	1840	1510	2220	1160	2750	1840	1510	2220
carp	whole-body	PCB057	6	6	100	21.5	276	FZ0306	74.1	38.1	41.3	21.5	276	74.1	38.1	41.3
carp	whole-body	PCB058	6	4	66.7	16.7	32.5 J	FZ0609	26.5	25.8	30.8	5.68 U	32.5 J	20.4	16.7	30.8
carp	whole-body	PCB059 & 062 & 075	6	6	100	421 J	4840 J	FZ0306	1280	601 J	745 J	421 J	4840 J	1280	601 J	745 J
carp	whole-body	PCB060	6	6	100	851	2370	FZ0306	1420	1140	1700	851	2370	1420	1140	1700
carp	whole-body	PCB061 & 070 & 074 & 076	6	6	100	6750 J	25000 J	FZ0306	12700	9860 J	14900 J	6750 J	25000 J	12700	9860 J	14900 J
carp	whole-body	PCB063	6	6	100	239	707	FZ0306	404	310	502	239	707	404	310	502
carp	whole-body	PCB064	6	6	100	1630	6500	FZ0306	2990	2170	2830	1630	6500	2990	2170	2830
carp	whole-body	PCB066	6	6	100	4700	16500	FZ0306	8260	6280	9230	4700	16500	8260	6280	9230
carp	whole-body	PCB067	6	6	100	106	900	FZ0306	276	140 J	226	106	900	276	140 J	226
carp	whole-body	PCB068	6	6	100	80.3	1150	FZ0306	311	143	252	80.3	1150	311	143	252
carp	whole-body	PCB072	6	6	100	115	985	FZ0306	289	132	212	115	985	289	132	212
carp	whole-body	PCB073	6	2	33.3	363	5320	FZ0306	2840	363	363	0.61 U	5320	951	6.38 U	363
carp	whole-body	PCB077	6	6	100	170	311	FZ0306	247	198	309	170	311	247	198	309
carp	whole-body	PCB078	6	0	0							3.92 U	11.3 U	5.88	4.18 U	7.08 U
carp	whole-body	PCB079	6	6	100	114	726	FZ0306	277	213	222	114	726	277	213	222
carp	whole-body	PCB080	6	0	0							4.31 U	10.4 U	7.14	6.12 U	10.1 U
carp	whole-body	PCB081	6	6	100	10.1	22.1	FZ0306	16.3	12.5	21	10.1	22.1	16.3	12.5	21
carp	whole-body	PCB082	6	6	100	752	3690	FZ0306	1490	940	1560	752	3690	1490	940	1560
carp	whole-body	PCB083 & 099	6	6	100	10800 J	60000 J	FZ0306	22000	13400 J	18900 J	10800 J	60000 J	22000	13400 J	18900 J
carp	whole-body	PCB084	6	6	100	1430	17400	FZ0306	4810	2320	3010	1430	17400	4810	2320	3010
carp	whole-body	PCB085 & 116 & 117	6	6	100	2210 J	9320 J	FZ0306	3940	2620 J	4270 J	2210 J	9320 J	3940	2620 J	4270 J
carp	whole-body	PCB086 & 087 & 097 & 108 & 119 & 125	6	6	100	7380 J	65700 J	FZ0306	19700	10300 J	13600 J	7380 J	65700 J	19700	10300 J	13600 J
carp	whole-body	PCB088 & 091	6	6	100	1690 J	39100 J	FZ0306	9320	3150 J	5540 J	1690 J	39100 J	9320	3150 J	5540 J
carp	whole-body	PCB089	6	6	100	54.7 J	423	FZ0306	129	57.5	109	54.7 J	423	129	57.5	109
carp	whole-body	PCB090 & 101 & 113	6	6	100	16800 J	244000 J	FZ0306	63300	24700 J	47300 J	16800 J	244000 J	63300	24700 J	47300 J
carp	whole-body	PCB092	6	6	100	3080	36600	FZ0306	10300	4780	8180	3080	36600	10300	4780	8180
carp	whole-body	PCB093 & 095 & 098 & 100 & 102	6	6	100	7550 J	209000 J	FZ0306	47900	13700 J	30100 J	7550 J	209000 J	47900	13700 J	30100 J
carp	whole-body	PCB094	6	6	100	73.7	8640	FZ0306	1670	197	746	73.7	8640	1670	197	746
carp	whole-body	PCB096	6	6	100	44.8	5000	FZ0306	961	116	376	44.8	5000	961	116	376
carp	whole-body	PCB103	6	6	100	296	6480	FZ0306	1730	736	1550	296	6480	1730	736	1550
carp	whole-body	PCB104	6	6	100	13.6	1800	FZ0306	334	39.1	99.1	13.6	1800	334	39.1	99.1
carp	whole-body	PCB105	6	6	100	3120	14600	FZ0306	6200	4370	5730	3120	14600	6200	4370	5730

Table 4-8. Round 1 Summary Statistics of Chemical Concentrations in Carp Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
carp	whole-body	PCB106	6	1	16.7	106	106	FZ0306	106	106	106	1.58 U	106	26.5	9.79 U	22.5 U
carp	whole-body	PCB107 & 124	6	6	100	329 J	1910 J	FZ0306	688	474 J	524 J	329 J	1910 J	688	474 J	524 J
carp	whole-body	PCB109	6	6	100	1110	4210	FZ0306	1850	1340	1690	1110	4210	1850	1340	1690
carp	whole-body	PCB110 & 115	6	6	100	10900 J	128000 J	FZ0306	35500	17500 J	23500 J	10900 J	128000 J	35500	17500 J	23500 J
carp	whole-body	PCB111	6	6	100	11.2	272	FZ0306	80.2	47.2	70.2	11.2	272	80.2	47.2	70.2
carp	whole-body	PCB112	6	0	0							2.25 U	11.9 U	6.93	6.89 U	7.01 U
carp	whole-body	PCB114	6	6	100	218	909	FZ0306	408	300	384	218	909	408	300	384
carp	whole-body	PCB118	6	6	100	11400	74900	FZ0306	25000	16700	17500	11400	74900	25000	16700	17500
carp	whole-body	PCB120	6	6	100	86	802	FZ0306	298	211	310	86	802	298	211	310
carp	whole-body	PCB121	6	6	100	16.6	983	FZ0306	213	57	127	16.6	983	213	57	127
carp	whole-body	PCB122	6	6	100	73.2	352	FZ0306	147	96.5	141	73.2	352	147	96.5	141
carp	whole-body	PCB123	6	6	100	178	762	FZ0306	340	246	323	178	762	340	246	323
carp	whole-body	PCB126	6	6	100	26.8	112	FZ0306	52.5	40.9	56.5	26.8	112	52.5	40.9	56.5
carp	whole-body	PCB127	6	6	100	13.5	143	FZ0306	47.6	31	40.5	13.5	143	47.6	31	40.5
carp	whole-body	PCB128 & 166	6	6	100	2550 J	32700 J	FZ0306	8840	3920 J	6440 J	2550 J	32700 J	8840	3920 J	6440 J
carp	whole-body	PCB129 & 138 & 160 & 163	6	6	100	28900 J	634000 J	FZ0306	154000	51300 J	119000 J	28900 J	634000 J	154000	51300 J	119000 J
carp	whole-body	PCB130	6	6	100	1400	19900	FZ0306	5300	2330	4150	1400	19900	5300	2330	4150
carp	whole-body	PCB131	6	6	100	170	3800	FZ0306	880	267	573	170	3800	880	267	573
carp	whole-body	PCB132	6	6	100	4330	162000	FZ0306	35400	8700	23100	4330	162000	35400	8700	23100
carp	whole-body	PCB133	6	6	100	530	12300	FZ0306	3080	1210	2270	530	12300	3080	1210	2270
carp	whole-body	PCB134 & 143	6	6	100	828 J	31600 J	FZ0306	6770	1680 J	3850 J	828 J	31600 J	6770	1680 J	3850 J
carp	whole-body	PCB135 & 151 & 154	6	6	100	8300 J	287000 J	FZ0306	65100	17300 J	48700 J	8300 J	287000 J	65100	17300 J	48700 J
carp	whole-body	PCB136	6	6	100	1750	103000	FZ0306	21300	4030	13200	1750	103000	21300	4030	13200
carp	whole-body	PCB137	6	6	100	933	3970	FZ0306	1560	990	1310	933	3970	1560	990	1310
carp	whole-body	PCB139 & 140	6	6	100	370 J	3020 J	FZ0306	963	499 J	845 J	370 J	3020 J	963	499 J	845 J
carp	whole-body	PCB141	6	6	100	4080	180000	FZ0306	39100	8120	29000	4080	180000	39100	8120	29000
carp	whole-body	PCB142	6	0	0							1.78 U	131 U	27	6.08 U	10.3 U
carp	whole-body	PCB144	6	6	100	1030	44200	FZ0306	9470	1970	6400	1030	44200	9470	1970	6400
carp	whole-body	PCB145	6	5	83.3	3.63	75.8 J	FZ0306	20.6	6.92	11.5	3.63	75.8 J	17.8	5.02	11.5
carp	whole-body	PCB146	6	6	100	5440	108000	FZ0306	28800	12000	25200	5440	108000	28800	12000	25200
carp	whole-body	PCB147 & 149	6	6	100	17700 J	654000 J	FZ0306	145000	33900 J	102000 J	17700 J	654000 J	145000	33900 J	102000 J
carp	whole-body	PCB148	6	6	100	93.7	2150	FZ0306	551	215	424	93.7	2150	551	215	424
carp	whole-body	PCB150	6	6	100	62.6	3600	FZ0306	762	157	435	62.6	3600	762	157	435
carp	whole-body	PCB152	6	6	100	21.6	2290	FZ0306	437	42.7	174	21.6	2290	437	42.7	174
carp	whole-body	PCB153 & 168	6	6	100	35800 J	782000 J	FZ0306	191000	61700 J	163000 J	35800 J	782000 J	191000	61700 J	163000 J
carp	whole-body	PCB155	6	6	100	7.66	448	FZ0306	88.2	13.9	34	7.66	448	88.2	13.9	34
carp	whole-body	PCB156	6	6	100	1650	31600	FZ0306	7860	2840	5910	1650	31600	7860	2840	5910
carp	whole-body	PCB157	6	6	100	272	2180	FZ0306	682	395	503	272	2180	682	395	503
carp	whole-body	PCB158	6	6	100	2340	54400	FZ0306	12900	4220	9640	2340	54400	12900	4220	9640
carp	whole-body	PCB159	6	6	100	159	11700	FZ0306	2480	329	1810	159	11700	2480	329	1810
carp	whole-body	PCB161	6	0	0							1.2 U	132 U	27.4	6.69 U	11.4 U
carp	whole-body	PCB162	6	6	100	83.7	459	FZ0306	159	96.7	127	83.7	459	159	96.7	127
carp	whole-body	PCB164	6	6	100	1180	44800	FZ0306	9680	2050	6280	1180	44800	9680	2050	6280
carp	whole-body	PCB165	6	6	100	17.8	839	FZ0306	193	71	124	17.8	839	193	71	124
carp	whole-body	PCB167	6	6	100	1080	16000	FZ0306	4130	1630	3100	1080	16000	4130	1630	3100
carp	whole-body	PCB169	6	6	100	3.18	15.3	FZ0306	5.96	4.25	5.42	3.18	15.3	5.96	4.25	5.42

Table 4-8. Round 1 Summary Statistics of Chemical Concentrations in Carp Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
carp	whole-body	PCB170	6	6	100	5700	285000	FZ0306	63300	15200	48600	5700	285000	63300	15200	48600
carp	whole-body	PCB171 & 173	6	6	100	1780 J	90900 J	FZ0306	20100	4780 J	15200 J	1780 J	90900 J	20100	4780 J	15200 J
carp	whole-body	PCB172	6	6	100	1430	58600	FZ0306	12800	2900	8970	1430	58600	12800	2900	8970
carp	whole-body	PCB174	6	6	100	3860	292000	FZ0306	61700	10500	45700	3860	292000	61700	10500	45700
carp	whole-body	PCB175	6	6	100	282	13700	FZ0306	2990	666	2150	282	13700	2990	666	2150
carp	whole-body	PCB176	6	6	100	718	35100	FZ0306	7670	1660	6050	718	35100	7670	1660	6050
carp	whole-body	PCB177	6	6	100	4170	179000	FZ0306	40000	10100	29800	4170	179000	40000	10100	29800
carp	whole-body	PCB178	6	6	100	1980	61300	FZ0306	14100	3920	10800	1980	61300	14100	3920	10800
carp	whole-body	PCB179	6	6	100	2540	121000	FZ0306	26000	5440	18600	2540	121000	26000	5440	18600
carp	whole-body	PCB180 & 193	6	6	100	19000 J	723000 J	FZ0306	163000	41300 J	122000 J	19000 J	723000 J	163000	41300 J	122000 J
carp	whole-body	PCB181	6	6	100	59	1070	FZ0306	264	95	176	59	1070	264	95	176
carp	whole-body	PCB182	6	6	100	61.8	743	FZ0306	227	127	199	61.8	743	227	127	199
carp	whole-body	PCB183 & 185	6	6	100	5690 J	232000 J	FZ0306	52300	12700 J	41600	5690 J	232000 J	52300	12700 J	41600
carp	whole-body	PCB184	6	4	66.7	8.7 J	69.4	FZ0306	26.4	8.87	18.5	7.12 U	69.4	20.8	8.87	18.5
carp	whole-body	PCB186	6	1	16.7	25.9	25.9	FZ0306	25.9	25.9	25.9	0.883 U	25.9	7.62	4.07 U	6.93 U
carp	whole-body	PCB187	6	6	100	15000	378000	FZ0306	91000	30800	70000	15000	378000	91000	30800	70000
carp	whole-body	PCB188	6	6	100	24.3	1140	FZ0306	236	46.7	107	24.3	1140	236	46.7	107
carp	whole-body	PCB189	6	6	100	237	9010	FZ0306	2060	612	1620	237	9010	2060	612	1620
carp	whole-body	PCB190	6	6	100	1400	58600	FZ0306	13200	3410	10300	1400	58600	13200	3410	10300
carp	whole-body	PCB191	6	6	100	270	15400	FZ0306	3280	684	2080	270	15400	3280	684	2080
carp	whole-body	PCB192	6	0	0							0.955 U	6.26 U	3.62	3.64 U	3.7 U
carp	whole-body	PCB194	6	6	100	2760	124000	FZ0306	27500	6690	21100	2760	124000	27500	6690	21100
carp	whole-body	PCB195	6	6	100	1030	59900	FZ0306	12800	2990	8900	1030	59900	12800	2990	8900
carp	whole-body	PCB196	6	6	100	1460	80200	FZ0306	17300	3760	12300	1460	80200	17300	3760	12300
carp	whole-body	PCB197 & 200	6	6	100	428 J	21600 J	FZ0306	4660	1030 J	3350 J	428 J	21600 J	4660	1030 J	3350 J
carp	whole-body	PCB198 & 199	6	6	100	3830 J	141000 J	FZ0306	31400	8260 J	22200 J	3830 J	141000 J	31400	8260 J	22200 J
carp	whole-body	PCB201	6	6	100	410	16500	FZ0306	3650	854	2640	410	16500	3650	854	2640
carp	whole-body	PCB202	6	6	100	924	19900	FZ0306	4760	1430	3770	924	19900	4760	1430	3770
carp	whole-body	PCB203	6	6	100	2530	87200	FZ0306	19700	5120	14600	2530	87200	19700	5120	14600
carp	whole-body	PCB204	6	2	33.3	3.49	19.7	FZ0306	11.6	3.49	3.49	3.49	19.7	11.4	9.72 U	16.5 U
carp	whole-body	PCB205	6	6	100	154	6450	FZ0306	1430	344	1100	154	6450	1430	344	1100
carp	whole-body	PCB206	6	6	100	1430	19500	FZ0306	4980	1780	3600	1430	19500	4980	1780	3600
carp	whole-body	PCB207	6	6	100	177	2860	FZ0306	706	238	533	177	2860	706	238	533
carp	whole-body	PCB208	6	6	100	619	3910	FZ0306	1280	704	901	619	3910	1280	704	901
carp	whole-body	PCB209	6	6	100	564	1120	FZ0306	784	662	996	564	1120	784	662	996
		Dioxins/Furans (pg/g)														
carp	whole-body	Tetrachlorodibenzo-p-dioxin	6	6	100	0.492	1.16	FZ0609	0.733	0.609	0.795	0.492	1.16	0.733	0.609	0.795
carp	whole-body	Pentachlorodibenzo-p-dioxin	6	6	100	0.714	2.2	FZ0609	1.39	1.27	1.8	0.714	2.2	1.39	1.27	1.8
carp	whole-body	Hexachlorodibenzo-p-dioxin	6	6	100	3.07	10.1	FZ0609	6.28	5.63	8.09	3.07	10.1	6.28	5.63	8.09
carp	whole-body	Heptachlorodibenzo-p-dioxin	6	6	100	5.25	18.3	FZ0609	12.8	13.2	17	5.25	18.3	12.8	13.2	17
carp	whole-body	Octachlorodibenzo-p-dioxin	6	6	100	8.04	36.7	FZ0609	20.7	18.7	31.1	8.04	36.7	20.7	18.7	31.1
carp	whole-body	Tetrachlorodibenzofuran	6	6	100	2.13	3.73	FZ0609	2.86	2.62	3.43	2.13	3.73	2.86	2.62	3.43
carp	whole-body	Pentachlorodibenzofuran	6	6	100	2.24	16.3	FZ0306	5.95	3.7	5.83	2.24	16.3	5.95	3.7	5.83
carp	whole-body	Hexachlorodibenzofuran	6	6	100	1.61	13	FZ0306	5.17	3.05	6.78	1.61	13	5.17	3.05	6.78
carp	whole-body	Heptachlorodibenzofuran	6	6	100	1.01	7.13 J	FZ0609	2.71	1.79	2.8	1.01	7.13 J	2.71	1.79	2.8
carp	whole-body	Octachlorodibenzofuran	6	6	100	0.262	0.711	FZ0609	0.463	0.448	0.636	0.262	0.711	0.463	0.448	0.636

Table 4-8. Round 1 Summary Statistics of Chemical Concentrations in Carp Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
carp	whole-body	2,3,7,8-Tetrachlorodibenzo-p-dioxin	6	6	100	0.457	1.07	FZ0609	0.687	0.586	0.751	0.457	1.07	0.687	0.586	0.751
carp	whole-body	2,3,7,8-TCDD TEQ	6	6	100	7.94 T	49.9 T	FZ0306	18.0	10.6 T	15.7 T	7.94 T	49.9 T	18.0	10.6 T	15.7 T
carp	whole-body	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	6	6	100	0.695	2.08	FZ0609	1.34	1.23	1.75	0.695	2.08	1.34	1.23	1.75
carp	whole-body	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	6	6	100	0.419	1.51	FZ0609	0.922	0.78	1.2	0.419	1.51	0.922	0.78	1.2
carp	whole-body	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	6	6	100	2.01	6.66	FZ0609	4.14	3.53	5.65	2.01	6.66	4.14	3.53	5.65
carp	whole-body	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	6	6	100	0.261	0.772	FZ0609	0.497	0.412	0.649	0.261	0.772	0.497	0.412	0.649
carp	whole-body	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	6	6	100	4.47	15	FZ0609	10	11.7	12.3	4.47	15	10	11.7	12.3
carp	whole-body	2,3,7,8-Tetrachlorodibenzofuran	6	6	100	1.62	2.34	FZ0609	1.89	1.68	2.28	1.62	2.34	1.89	1.68	2.28
carp	whole-body	1,2,3,7,8-Pentachlorodibenzofuran	6	6	100	0.414	1.05	FZ0609	0.738	0.581	1.02	0.414	1.05	0.738	0.581	1.02
carp	whole-body	2,3,4,7,8-Pentachlorodibenzofuran	6	6	100	0.764	12.7	FZ0306	3.15	1.3	1.91	0.764	12.7	3.15	1.3	1.91
carp	whole-body	1,2,3,4,7,8-Hexachlorodibenzofuran	6	6	100	0.32	8.17	FZ0306	1.96	0.839	1.13	0.32	8.17	1.96	0.839	1.13
carp	whole-body	1,2,3,6,7,8-Hexachlorodibenzofuran	6	6	100	0.165	1.96	FZ0306	0.606	0.335	0.587	0.165	1.96	0.606	0.335	0.587
carp	whole-body	1,2,3,7,8,9-Hexachlorodibenzofuran	6	4	66.7	0.012	0.057	FZ0306	0.0328	0.029	0.033	0.012	0.057	0.0268	0.018 U	0.033
carp	whole-body	2,3,4,6,7,8-Hexachlorodibenzofuran	6	6	100	0.097	0.48	FZ0306	0.273	0.191	0.421	0.097	0.48	0.273	0.191	0.421
carp	whole-body	1,2,3,4,6,7,8-Heptachlorodibenzofuran	6	6	100	0.537	3.14	FZ0609	1.37	1	1.51	0.537	3.14	1.37	1	1.51
carp	whole-body	1,2,3,4,7,8,9-Heptachlorodibenzofuran	6	6	100	0.042	0.294 J	FZ0609	0.125	0.085	0.179	0.042	0.294 J	0.125	0.085	0.179

Notes:

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table 4-9. Round 1 Summary Statistics of Chemical Concentrations in Clam Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
		Conventionals (percent)														
clam	body without shell	Total solids	3	3	100	11.4 T	12.8	07R003	12.1	12.1	12.1	11.4 T	12.8	12.1	12.1	12.1
clam	body without shell	Lipids	3	3	100	0.837 T	1.7	07R003	1.18	1	1	0.837 T	1.7	1.18	1	1
		Metals (mg/kg)														
clam	body without shell	Aluminum	3	3	100	29.9	77.2	07R003	53.5	53.4 T	53.4 T	29.9	77.2	53.5	53.4 T	53.4 T
clam	body without shell	Antimony	3	2	66.7	0.001 JT	0.001 J	07R006	0.001	0.001 JT	0.001 JT	0.001 JT	0.001 J	0.001	0.001 U	0.001 U
clam	body without shell	Arsenic	3	3	100	0.802	0.923	07R006	0.856	0.842 T	0.842 T	0.802	0.923	0.856	0.842 T	0.842 T
clam	body without shell	Cadmium	3	3	100	0.05	0.076	07R006	0.0597	0.053 T	0.053 T	0.05	0.076	0.0597	0.053 T	0.053 T
clam	body without shell	Chromium	3	3	100	0.4	0.58	07R006	0.47	0.43 T	0.43 T	0.4	0.58	0.47	0.43 T	0.43 T
clam	body without shell	Copper	3	3	100	6.85	8.36	07R006	7.72	7.94 T	7.94 T	6.85	8.36	7.72	7.94 T	7.94 T
clam	body without shell	Lead	3	3	100	0.0707 T	0.316	07R006	0.153	0.0731	0.0731	0.0707 T	0.316	0.153	0.0731	0.0731
clam	body without shell	Manganese	3	3	100	4.17 T	7.55	07R006	5.55	4.93	4.93	4.17 T	7.55	5.55	4.93	4.93
clam	body without shell	Mercury	3	3	100	0.006 T	0.012	06R002	0.00967	0.011	0.011	0.006 T	0.012	0.00967	0.011	0.011
clam	body without shell	Nickel	3	3	100	0.16 T	0.211	07R006	0.185	0.183	0.183	0.16 T	0.211	0.185	0.183	0.183
clam	body without shell	Selenium	3	1	33.3	0.1 T	0.1 T	06R002	0.1	0.1 T	0.1 T	0.1 T	0.1 U	0.1	0.1 U	0.1 U
clam	body without shell	Silver	3	3	100	0.0371	0.048 T	06R002	0.0417	0.0399	0.0399	0.0371	0.048 T	0.0417	0.0399	0.0399
clam	body without shell	Thallium	3	3	100	0.00035 JT	0.0007 J	07R003	0.000483	0.0004 J	0.0004 J	0.00035 JT	0.0007 J	0.000483	0.0004 J	0.0004 J
clam	body without shell	Zinc	3	3	100	21.4	23.2 T	06R002	22.1	21.6	21.6	21.4	23.2 T	22.1	21.6	21.6
		Butyltins (ug/kg)														
clam	body without shell	Butyltin ion	2	2	100	2.9	3.7	06R002	3.3	2.9	2.9	2.9	3.7	3.3	2.9	2.9
clam	body without shell	Dibutyltin ion	2	2	100	5.6	7.9	06R002	6.75	5.6	5.6	5.6	7.9	6.75	5.6	5.6
clam	body without shell	Tributyltin ion	2	2	100	4.4	7.6	06R002	6	4.4	4.4	4.4	7.6	6	4.4	4.4
clam	body without shell	Tetrabutyltin	2	0	0							0.19 U	0.19 U	0.19	0.19 U	0.19 U
		PCB Aroclors (ug/kg)														
clam	body without shell	Aroclor 1016	3	0	0							1.9 U	20 U	10.5	9.5 U	9.5 U
clam	body without shell	Aroclor 1242	3	0	0							1.9 U	28 U	13.1	9.5 U	9.5 U
clam	body without shell	Aroclor 1248	3	2	66.7	39	120	07R006	79.5	39	39	39	120	66.7	41 U	41 U
clam	body without shell	Aroclor 1254	3	0	0							53 U	81 U	66	64 U	64 U
clam	body without shell	Aroclor 1260	3	2	66.7	23 J	77	06R002	50	23 J	23 J	22 U	77	40.7	23 J	23 J
clam	body without shell	Aroclor 1262	3	0	0							1.9 U	9.5 U	4.43	1.9 U	1.9 U
clam	body without shell	Aroclor 1268	3	0	0							1.9 U	9.5 U	4.43	1.9 U	1.9 U
clam	body without shell	Aroclor 1221	3	0	0							1.9 U	12 U	7.8	9.5 U	9.5 U
clam	body without shell	Aroclor 1232	3	0	0							1.9 U	34 U	15.1	9.5 U	9.5 U
clam	body without shell	Total PCB Aroclors	3	3	100	62 JT	120 T	07R006	86.3	77 T	77 T	62 JT	120 T	86.3	77 T	77 T
		Organochlorine Pesticides (ug/kg)														
clam	body without shell	2,4'-DDD	3	3	100	2.6 N	82 T	07R006	32.9	14 J	14 J	2.6 N	82 T	32.9	14 J	14 J
clam	body without shell	2,4'-DDE	3	2	66.7	2.5 NJ	12.5 JT	07R006	7.5	2.5 NJ	2.5 NJ	1.1 U	12.5 JT	5.37	2.5 NJ	2.5 NJ
clam	body without shell	2,4'-DDT	3	2	66.7	20	39 T	07R006	29.5	20	20	3.9 U	39 T	21	20	20
clam	body without shell	4,4'-DDD	3	3	100	2.2 N	160 T	07R006	64.1	30	30	2.2 N	160 T	64.1	30	30
clam	body without shell	4,4'-DDE	3	3	100	7.5 N	94.5 T	07R006	42.7	26	26	7.5 N	94.5 T	42.7	26	26
clam	body without shell	4,4'-DDT	3	2	66.7	49	75 T	07R006	62	49	49	8.3 U	75 T	44.1	49	49
clam	body without shell	Total of 3 isomers: pp-DDT,-DDD,-DDE	3	3	100	9.7 T	330 T	07R006	148	105 T	105 T	9.7 T	330 T	148	105 T	105 T
clam	body without shell	Aldrin	3	0	0							1 U	1.1 U	1.03	1 UT	1 UT
clam	body without shell	alpha-Hexachlorocyclohexane	3	0	0							1 U	1 UT	1	1 U	1 U
clam	body without shell	beta-Hexachlorocyclohexane	3	1	33.3	1.2 NJ	1.2 NJ	06R002	1.2	1.2 NJ	1.2 NJ	1 UJ	8.5 UT	3.57	1.2 NJ	1.2 NJ
clam	body without shell	delta-Hexachlorocyclohexane	3	0	0							1 U	1 UT	1	1 U	1 U

Table 4-9. Round 1 Summary Statistics of Chemical Concentrations in Clam Tissue.

Species	Tissue Type	Analyte	N	N Detected	% Detected	Detected Concentrations						Detected and Nondetected Concentrations				
						Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
clam	body without shell	gamma-Hexachlorocyclohexane	3	0	0							1 U	1 UT	1	1 U	1 U
clam	body without shell	cis-Chlordane	3	1	33.3	2.2 N	2.2 N	07R006	2.2	2.2 N	2.2 N	1 U	2.2 N	1.4	1 U	1 U
clam	body without shell	trans-Chlordane	3	2	66.7	1.1 NJ	1.8 NJ	06R002	1.45	1.1 NJ	1.1 NJ	1 UT	1.8 NJ	1.3	1.1 NJ	1.1 NJ
clam	body without shell	Oxychlordane	3	0	0							1 U	1 UT	1	1 U	1 U
clam	body without shell	cis-Nonachlor	3	0	0							1.2 U	12 U	6.77	7.1 UT	7.1 UT
clam	body without shell	trans-Nonachlor	3	1	33.3	2.7 NJ	2.7 NJ	06R002	2.7	2.7 NJ	2.7 NJ	1 U	2.7 NJ	1.57	1 UT	1 UT
clam	body without shell	Dieldrin	3	0	0							1 U	1 UT	1	1 U	1 U
clam	body without shell	alpha-Endosulfan	3	0	0							1 U	1 U	1	1 U	1 U
clam	body without shell	beta-Endosulfan	3	0	0							1 U	2.1 UT	1.37	1 U	1 U
clam	body without shell	Endosulfan sulfate	3	0	0							1 UJ	1 UJT	1	1 UJ	1 UJ
clam	body without shell	Endrin	3	0	0							1 U	2.4 UT	1.47	1 U	1 U
clam	body without shell	Endrin aldehyde	3	1	33.3	0.39 J	0.39 J	07R003	0.39	0.39 J	0.39 J	0.39 J	1 UJT	0.797	1 UJ	1 UJ
clam	body without shell	Endrin ketone	3	0	0							1 U	1 UT	1	1 U	1 U
clam	body without shell	Heptachlor	3	0	0							1 U	1 UT	1	1 U	1 U
clam	body without shell	Heptachlor epoxide	3	2	66.7	1.3 NJ	2.1 N	06R002	1.7	1.3 NJ	1.3 NJ	1.3 NJ	8 UT	3.8	2.1 N	2.1 N
clam	body without shell	Methoxychlor	3	0	0							1 UJ	1.6 UJ	1.2	1 UJT	1 UJT
clam	body without shell	Mirex	3	0	0							1 U	1 UT	1	1 U	1 U
clam	body without shell	Toxaphene	3	0	0							50 U	140 U	107	130 U	130 U
		Semivolatile Organic Compounds (ug/kg)														
clam	body without shell	1,2,4-Trichlorobenzene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	1,2-Dichlorobenzene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	1,2-Diphenylhydrazine	3	0	0							31 U	33 U	32	32 U	32 U
clam	body without shell	1,3-Dichlorobenzene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	1,4-Dichlorobenzene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Azobenzene	3	0	0							160 U	160 U	160	160 UT	160 UT
clam	body without shell	Bis(2-chloro-1-methylethyl) ether	3	0	0							160 U	160 U	160	160 UT	160 UT
clam	body without shell	2,4-Dinitrotoluene	3	0	0							62 UT	74 UT	67	65 UT	65 UT
clam	body without shell	2,6-Dinitrotoluene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	2-Chloronaphthalene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	2-Nitroaniline	3	0	0							780 U	820 U	803	810 UT	810 UT
clam	body without shell	3,3'-Dichlorobenzidine	3	0	0							1600 U	1600 U	1600	1600 UT	1600 UT
clam	body without shell	3-Nitroaniline	3	0	0							780 U	820 U	803	810 UT	810 UT
clam	body without shell	4-Bromophenyl phenyl ether	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	4-Chloroaniline	3	0	0							160 UT	160 UT	160	160 UT	160 UT
clam	body without shell	4-Chlorophenyl phenyl ether	3	0	0							78 UT	82 UT	80.3	81 UT	81 UT
clam	body without shell	4-Nitroaniline	3	0	0							780 U	820 U	803	810 UT	810 UT
clam	body without shell	Benzyl alcohol	3	1	33.3	1300 T	1300 T	07R003	1300	1300 T	1300 T	310 U	1300 T	647	330 U	330 U
clam	body without shell	Bis(2-chloroethoxy) methane	3	0	0							160 U	160 U	160	160 UT	160 UT
clam	body without shell	Bis(2-chloroethyl) ether	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Carbazole	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Dibenzofuran	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Hexachlorobenzene	3	0	0							1 UT	6.4 UT	2.93	1.4 UT	1.4 UT
clam	body without shell	Hexachlorobutadiene	3	0	0							1 UJT	1 UJT	1	1 UJT	1 UJT
clam	body without shell	Hexachlorocyclopentadiene	3	0	0							780 U	820 U	803	810 UT	810 UT
clam	body without shell	Hexachloroethane	3	0	0							13 UT	33 UT	26	32 UT	32 UT
clam	body without shell	Nitrobenzene	3	0	0							33 UT	36 UT	34.7	35 UT	35 UT

Table 4-9. Round 1 Summary Statistics of Chemical Concentrations in Clam Tissue.

Species	Tissue Type	Analyte	N	N Detected	% Detected	Detected Concentrations Minimum	Maximum	Location	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th UCL
clam	body without shell	N-Nitrosodimethylamine	3	0	0							160 UJT	780 U	380	200 UT	200 UT
clam	body without shell	N-Nitrosodipropylamine	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	N-Nitrosodiphenylamine	3	0	0							160 U	160 U	160	160 UT	160 UT
		Phenols (ug/kg)														
clam	body without shell	2,4,5-Trichlorophenol	3	0	0							780 U	820 U	803	810 UT	810 UT
clam	body without shell	2,4,6-Trichlorophenol	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	2,4-Dichlorophenol	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	2,4-Dimethylphenol	3	0	0							470 U	490 UT	483	490 U	490 U
clam	body without shell	2,4-Dinitrophenol	3	0	0							3100 U	3300 U	3200	3200 U	3200 U
clam	body without shell	2-Chlorophenol	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	2-Methylphenol	3	0	0							160 U	160 U	160	160 UT	160 UT
clam	body without shell	4,6-Dinitro-2-methylphenol	3	0	0							3100 U	3300 U	3200	3200 UT	3200 UT
clam	body without shell	4-Chloro-3-methylphenol	3	0	0							310 U	330 U	320	320 UT	320 UT
clam	body without shell	4-Methylphenol	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	4-Nitrophenol	3	0	0							1600 U	1600 U	1600	1600 UT	1600 UT
clam	body without shell	Pentachlorophenol	3	0	0							160 UT	160 UT	160	160 UT	160 UT
clam	body without shell	Phenol	3	1	33.3	2600 T	2600 T	07R003	2600	2600 T	2600 T	310 U	2600 T	1080	330 U	330 U
clam	body without shell	2,3,4,5-Tetrachlorophenol	3	0	0							1600 U	1600 U	1600	1600 UT	1600 UT
clam	body without shell	2,3,5,6-Tetrachlorophenol	3	0	0							1600 U	1600 U	1600	1600 UT	1600 UT
		Phthalates (ug/kg)														
clam	body without shell	Dimethyl phthalate	3	0	0							160 U	160 U	160	160 UT	160 UT
clam	body without shell	Diethyl phthalate	3	0	0							160 U	160 U	160	160 UT	160 UT
clam	body without shell	Dibutyl phthalate	3	0	0							400 UT	500 U	460	480 U	480 U
clam	body without shell	Butylbenzyl phthalate	3	0	0							310 U	330 U	320	320 UT	320 UT
clam	body without shell	Di-n-octyl phthalate	3	0	0							330 U	520 U	417	400 UT	400 UT
clam	body without shell	Bis(2-ethylhexyl) phthalate	3	0	0							120 UT	340 UT	210	170 UT	170 UT
		PAHs (ug/kg)														
clam	body without shell	2-Methylnaphthalene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Acenaphthene	3	0	0							31 UT	58 UT	41.7	36 UT	36 UT
clam	body without shell	Acenaphthylene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Anthracene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Fluorene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Naphthalene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Phenanthrene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Low Molecular Weight PAH	3	0	0							31 UT	58 UT	41.7	36 UT	36 UT
clam	body without shell	Dibenz(a,h)anthracene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Benz(a)anthracene	3	1	33.3	50 JT	50 JT	07R006	50	50 JT	50 JT	32 UT	50 JT	38.3	33 UT	33 UT
clam	body without shell	Benzo(a)pyrene	3	0	0							32 UT	34 UT	33	33 UT	33 UT
clam	body without shell	Benzo(b)fluoranthene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Benzo(g,h,i)perylene	3	0	0							33 UT	160 UT	91.3	81 UT	81 UT
clam	body without shell	Benzo(k)fluoranthene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Chrysene	3	1	33.3	53 JT	53 JT	07R006	53	53 JT	53 JT	32 UT	53 JT	39.3	33 UT	33 UT
clam	body without shell	Fluoranthene	3	3	100	42 T	81 T	07R006	59.3	55 T	55 T	42 T	81 T	59.3	55 T	55 T
clam	body without shell	Indeno(1,2,3-cd)pyrene	3	0	0							31 UT	33 UT	32	32 UT	32 UT
clam	body without shell	Pyrene	3	3	100	42 T	87 T	07R003	71	84 T	84 T	42 T	87 T	71	84 T	84 T
clam	body without shell	High Molecular Weight PAH	3	3	100	84 T	268 JT	07R006	165	142 T	142 T	84 T	268 JT	165	142 T	142 T

Table 4-9. Round 1 Summary Statistics of Chemical Concentrations in Clam Tissue.

Species	Tissue Type	Analyte	N	N Detected	% Detected	Detected Concentrations Minimum	Maximum	Location	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th UCL
clam	body without shell	Polycyclic Aromatic Hydrocarbons	3	3	100	84 T	268 JT	07R006	165	142 T	142 T	84 T	268 JT	165	142 T	142 T

Notes:

The mean, median, and 95[th] upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table 4-10. Round 1 Summary Statistics of Chemical Concentrations in Crayfish Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	**Tissue Type**	**Analyte**	**N**	**Detected**	**Detected**	**Minimum**	**Maximum**	**Location**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th UCL**
		Conventionals (percent)														
crayfish	whole-body	Total solids	27	27	100	22.9	30.7	08R001	26.4	26.7	28.6	22.9	30.7	26.4	26.7	28.6
crayfish	whole-body	Lipids	27	27	100	0.16	1.3	08R001	0.781	0.79	1.1	0.16	1.3	0.781	0.79	1.1
		Metals (mg/kg)														
crayfish	whole-body	Aluminum	27	27	100	35 J	203	07R004	94.4	89.7	145	35 J	203	94.4	89.7	145
crayfish	whole-body	Antimony	27	25	92.6	0.004 J	0.02 J	05R003	0.008	0.007 J	0.014 J	0.004 UJ	0.02 J	0.00774	0.006 J	0.014 J
crayfish	whole-body	Arsenic	27	27	100	0.25	0.5 J	07R004	0.352	0.35 J	0.41 J	0.25	0.5 J	0.352	0.35 J	0.41 J
crayfish	whole-body	Cadmium	27	27	100	0.007 J	0.036 J	05R003	0.0177	0.016 J	0.029 J	0.007 J	0.036 J	0.0177	0.016 J	0.029 J
crayfish	whole-body	Chromium	27	27	100	0.09 J	0.9	07R004	0.475	0.4	0.9	0.09 J	0.9	0.475	0.4	0.9
crayfish	whole-body	Copper	27	27	100	10.4	17.6	09R001	14.1	13.8	17	10.4	17.6	14.1	13.8	17
crayfish	whole-body	Lead	27	27	100	0.041 J	1.3 JT	04R002	0.147	0.091 J	0.229 J	0.041 J	1.3 JT	0.147	0.091 J	0.229 J
crayfish	whole-body	Manganese	27	27	100	58.9	213	06R004	138	137	193	58.9	213	138	137	193
crayfish	whole-body	Mercury	27	27	100	0.02	0.041	06R001	0.0283	0.028	0.037	0.02	0.041	0.0283	0.028	0.037
crayfish	whole-body	Nickel	27	26	96.3	0.18	0.83	07R006	0.391	0.38 J	0.55 J	0.18	0.83	0.385	0.38 J	0.55 J
crayfish	whole-body	Selenium	27	0	0							0.2 U	0.3 U	0.278	0.3 U	0.3 U
crayfish	whole-body	Silver	27	25	92.6	0.0154 J	0.0472 J	04R003	0.0307	0.03 J	0.0434 JT	0.0154 J	0.0472 J	0.0297	0.0293 J	0.0434 JT
crayfish	whole-body	Thallium	27	27	100	0.0015 J	0.0079 J	02R001	0.00325	0.0027 J	0.0054 J	0.0015 J	0.0079 J	0.00325	0.0027 J	0.0054 J
crayfish	whole-body	Zinc	27	27	100	13.7 J	20.3 J	06R004	16.7	16.6 J	19.1 J	13.7 J	20.3 J	16.7	16.6 J	19.1 J
		PCB Aroclors (ug/kg)														
crayfish	whole-body	Aroclor 1016	27	0	0							0.95 U	9.7 U	2.08	0.95 U	5.6 U
crayfish	whole-body	Aroclor 1242	27	0	0							0.95 U	18 U	2.73	1 U	7.5 U
crayfish	whole-body	Aroclor 1248	27	0	0							0.95 U	30 U	5.76	1.9 U	18 U
crayfish	whole-body	Aroclor 1254	27	0	0							1 U	61 U	9.38	5.7 U	22 U
crayfish	whole-body	Aroclor 1260	27	12	44.4	16	280	03R005	63.6	43	110	1.4 U	280	30	5 U	59
crayfish	whole-body	Aroclor 1262	27	0	0							0.95 U	9.5 U	1.62	0.95 U	1.9 U
crayfish	whole-body	Aroclor 1268	27	0	0							0.95 U	9.5 U	1.62	0.95 U	1.9 U
crayfish	whole-body	Aroclor 1221	27	0	0							0.95 U	26 U	4.76	3.5 U	8.8 U
crayfish	whole-body	Aroclor 1232	27	0	0							0.95 U	30 U	3.86	1.3 U	8.9 U
crayfish	whole-body	Total PCB Aroclors	27	12	44.4	16 T	280 T	03R005	63.6	43 T	110 T	1.7 UT	280 T	30.7	7 UT	59 T
		Organochlorine Pesticides (ug/kg)														
crayfish	whole-body	2,4'-DDD	27	1	3.7	4.3 NJ	4.3 NJ	07R006	4.3	4.3 NJ	4.3 NJ	1 U	4.3 NJ	1.16	1 U	1 U
crayfish	whole-body	2,4'-DDE	27	3	11.1	1 NJ	3.3 NJ	04R003	1.9	1.4 NJ	1.4 NJ	1 UJ	3.3 NJ	1.14	1 UJ	1.4 NJ
crayfish	whole-body	2,4'-DDT	27	19	70.4	1.1 NJ	9.5 NJ	02R015	3.05	2.1 N	7.6 NJ	1 U	9.5 NJ	2.96	2.1 NJ	6.6 NJ
crayfish	whole-body	4,4'-DDD	27	5	18.5	1.2 NJ	17 NJ	07R006	6.76	3.1 J	9.6 NJ	1 U	17 NJ	2.07	1 U	3.1 J
crayfish	whole-body	4,4'-DDE	27	27	100	1.6 J	51	07R006	6.27	3.8	8.8	1.6 J	51	6.27	3.8	8.8
crayfish	whole-body	4,4'-DDT	27	8	29.6	1.5 N	14 J	07R003	5.48	2.3 NJ	10	1 U	14 J	2.86	1.5 N	9.5
crayfish	whole-body	Total of 3 isomers: pp-DDT,-DDD,-DDE	27	27	100	1.6 JT	78 JT	07R006	9.15	4.8 JT	14.6 JT	1.6 JT	78 JT	9.15	4.8 JT	14.6 JT
crayfish	whole-body	Aldrin	27	0	0							1 U	2 U	1.04	1 U	1 U
crayfish	whole-body	alpha-Hexachlorocyclohexane	27	0	0							1 U	2 U	1.04	1 U	1 U
crayfish	whole-body	beta-Hexachlorocyclohexane	27	0	0							1 U	2 UJ	1.04	1 U	1 UJ
crayfish	whole-body	delta-Hexachlorocyclohexane	27	0	0							1 U	2.8 U	1.1	1 U	1 U
crayfish	whole-body	gamma-Hexachlorocyclohexane	27	0	0							1 U	2 U	1.04	1 U	1 U
crayfish	whole-body	cis-Chlordane	27	0	0							1 U	2 UJ	1.04	1 U	1 UJ
crayfish	whole-body	trans-Chlordane	27	5	18.5	1 N	2.7 NJ	04R004	1.6	1.3 NJ	1.9 NJ	1 U	2.7 NJ	1.15	1 U	1.9 NJ
crayfish	whole-body	Oxychlordane	27	0	0							1 UJ	2 U	1.04	1 UJ	1 U

Table 4-10. Round 1 Summary Statistics of Chemical Concentrations in Crayfish Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
crayfish	whole-body	cis-Nonachlor	27	0	0							1 UJ	2.3 U	1.18	1 UJ	1.8 U
crayfish	whole-body	trans-Nonachlor	27	0	0							1 UJ	2 UJ	1.04	1 UJ	1 U
crayfish	whole-body	Dieldrin	27	0	0							1 U	2 UJ	1.04	1 U	1 UJ
crayfish	whole-body	alpha-Endosulfan	27	0	0							1 U	2 U	1.04	1 U	1 U
crayfish	whole-body	beta-Endosulfan	27	11	40.7	1 N	3.1 J	03R004	1.67	1.6 N	2.2 J	1 U	3.1 J	1.34	1 UJ	2.1 J
crayfish	whole-body	Endosulfan sulfate	27	0	0							1 U	2 UJ	1.04	1 U	1 UJ
crayfish	whole-body	Endrin	27	5	18.5	1.1 N	2.8 NJ	03R005	1.64	1.3 NJ	1.8 NJ	1 U	2.8 NJ	1.17	1 U	1.8 NJ
crayfish	whole-body	Endrin aldehyde	27	0	0							1 U	2 UJ	1.04	1 U	1 UJ
crayfish	whole-body	Endrin ketone	27	0	0							1 U	2 UJ	1.04	1 U	1 UJ
crayfish	whole-body	Heptachlor	27	0	0							1 U	2 U	1.04	1 U	1 U
crayfish	whole-body	Heptachlor epoxide	27	0	0							1 U	2 U	1.04	1 U	1 U
crayfish	whole-body	Methoxychlor	27	0	0							1 U	2 U	1.04	1 U	1 U
crayfish	whole-body	Mirex	27	0	0							1 UJ	2 UJ	1.04	1 UJ	1 UJ
crayfish	whole-body	Toxaphene	27	0	0							50 U	350 U	79.3	50 U	150 UJ
		Semivolatile Organic Compounds (ug/kg)														
crayfish	whole-body	1,2,4-Trichlorobenzene	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	1,2-Dichlorobenzene	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	1,2-Diphenylhydrazine	27	0	0							17 U	37 U	32.6	33 U	33 U
crayfish	whole-body	1,3-Dichlorobenzene	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	1,4-Dichlorobenzene	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	Azobenzene	27	0	0							160 U	190 U	170	170 U	170 U
crayfish	whole-body	Bis(2-chloro-1-methylethyl) ether	27	0	0							160 U	190 U	170	170 U	170 U
crayfish	whole-body	2,4-Dinitrotoluene	27	0	0							33 UT	73 UT	37.1	33 UT	66 UT
crayfish	whole-body	2,6-Dinitrotoluene	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	2-Chloronaphthalene	27	0	0							17 UT	66 UT	33.8	33 UT	33 UT
crayfish	whole-body	2-Nitroaniline	27	0	0							820 U	930 U	833	830 U	830 U
crayfish	whole-body	3,3'-Dichlorobenzidine	27	0	0							1600 U	1900 U	1700	1700 U	1700 U
crayfish	whole-body	3-Nitroaniline	27	0	0							820 U	930 U	833	830 U	830 U
crayfish	whole-body	4-Bromophenyl phenyl ether	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	4-Chloroaniline	27	0	0							83 UT	190 UJT	166	170 UT	170 UT
crayfish	whole-body	4-Chlorophenyl phenyl ether	27	0	0							42 UT	93 UT	81.7	83 UT	83 UT
crayfish	whole-body	4-Nitroaniline	27	0	0							820 U	930 U	833	830 U	830 U
crayfish	whole-body	Aniline	27	0	0							1500 U	1900 U	1620	1600 U	1700 U
crayfish	whole-body	Benzoic acid	27	0	0							7600 U	9400 UJ	8130	8200 U	8300 U
crayfish	whole-body	Benzyl alcohol	27	0	0							330 U	370 U	331	330 U	330 U
crayfish	whole-body	Bis(2-chloroethoxy) methane	27	0	0							160 U	190 U	170	170 U	170 U
crayfish	whole-body	Bis(2-chloroethyl) ether	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	Carbazole	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	Dibenzofuran	27	0	0							17 UT	66 UT	33.8	33 UT	33 UT
crayfish	whole-body	Hexachlorobenzene	27	0	0							1 UT	2 UT	1.04	1 UT	1 UT
crayfish	whole-body	Hexachlorobutadiene	27	0	0							1 UJT	2 UJT	1.04	1 UJT	1 UJT
crayfish	whole-body	Hexachlorocyclopentadiene	27	0	0							820 U	930 U	833	830 UJ	830 U
crayfish	whole-body	Hexachloroethane	27	0	0							1 UJT	37 UT	17.2	17 UT	33 UT
crayfish	whole-body	Isophorone	27	0	0							1500 U	1900 U	1620	1600 U	1700 U
crayfish	whole-body	Nitrobenzene	27	0	0							17 UT	37 UT	32.7	33 UT	33 UT

Table 4-10. Round 1 Summary Statistics of Chemical Concentrations in Crayfish Tissue.

Species	Tissue Type	Analyte	N	N Detected	% Detected	Detected Concentrations Minimum	Maximum	Location	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th UCL
crayfish	whole-body	N-Nitrosodimethylamine	27	0	0							160 UJT	190 UT	170	170 UJT	170 UJT
crayfish	whole-body	N-Nitrosodipropylamine	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	N-Nitrosodiphenylamine	27	0	0							160 U	190 U	170	170 U	170 U
		Phenols (ug/kg)														
crayfish	whole-body	2,4,5-Trichlorophenol	27	0	0							820 U	930 U	833	830 U	830 U
crayfish	whole-body	2,4,6-Trichlorophenol	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	2,4-Dichlorophenol	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	2,4-Dimethylphenol	27	0	0							490 U	560 U	501	500 U	500 U
crayfish	whole-body	2,4-Dinitrophenol	5	0	0							3300 U	3300 U	3300	3300 U	3300 U
crayfish	whole-body	2-Chlorophenol	27	0	0							33 UT	67 UT	48.3	56 UT	63 UT
crayfish	whole-body	2-Methylphenol	27	0	0							160 U	190 U	170	170 U	170 U
crayfish	whole-body	2-Nitrophenol	27	0	0							1500 U	1900 U	1620	1600 U	1700 U
crayfish	whole-body	4,6-Dinitro-2-methylphenol	27	0	0							3300 U	3700 U	3310	3300 U	3300 U
crayfish	whole-body	4-Chloro-3-methylphenol	27	0	0							330 U	370 U	331	330 U	330 U
crayfish	whole-body	4-Methylphenol	27	2	7.41	33 T	190 T	03R004	112	33 T	33 T	17 UT	190 T	68.4	33 UT	120 UT
crayfish	whole-body	4-Nitrophenol	27	0	0							1600 U	1900 U	1700	1700 U	1700 U
crayfish	whole-body	Pentachlorophenol	27	1	3.7	130 T	130 T	08R003	130	130 T	130 T	130 T	190 UT	168	170 UT	170 UT
crayfish	whole-body	Phenol	27	1	3.7	520	520	03R004	520	520	520	330 U	520	339	330 U	330 U
crayfish	whole-body	2,3,4,5-Tetrachlorophenol	27	0	0							1600 U	1900 U	1700	1700 U	1700 U
crayfish	whole-body	2,3,5,6-Tetrachlorophenol	27	0	0							1600 U	1900 U	1700	1700 U	1700 U
		Phthalates (ug/kg)														
crayfish	whole-body	Dimethyl phthalate	27	0	0							160 U	190 U	170	170 U	170 U
crayfish	whole-body	Diethyl phthalate	27	0	0							170 U	950 U	212	170 U	270 U
crayfish	whole-body	Dibutyl phthalate	27	0	0							330 U	650 U	362	330 U	500 U
crayfish	whole-body	Butylbenzyl phthalate	27	0	0							330 U	370 U	331	330 U	330 U
crayfish	whole-body	Di-n-octyl phthalate	27	0	0							330 U	1300 U	400	330 U	560 U
crayfish	whole-body	Bis(2-ethylhexyl) phthalate	27	0	0							99 UJT	270 UJT	128	100 UJT	200 UT
		PAHs (ug/kg)														
crayfish	whole-body	2-Methylnaphthalene	27	0	0							17 UT	73 UT	35.5	33 UT	37 UT
crayfish	whole-body	Acenaphthene	27	0	0							33 UT	83 UT	35.7	33 UT	37 UT
crayfish	whole-body	Acenaphthylene	27	0	0							17 UT	90 UT	34.7	33 UT	33 UT
crayfish	whole-body	Anthracene	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	Fluorene	27	0	0							17 UT	70 UT	35.3	33 UT	37 UT
crayfish	whole-body	Naphthalene	27	0	0							17 UT	82 UT	53.3	69 UT	70 UT
crayfish	whole-body	Phenanthrene	27	1	3.7	97 T	97 T	06R004	97	97 T	97 T	17 UT	97 T	39	33 UT	83 UT
crayfish	whole-body	Low Molecular Weight PAH	27	1	3.7	97 T	97 T	06R004	97	97 T	97 T	33 UT	97 T	58	70 UT	90 UT
crayfish	whole-body	Dibenz(a,h)anthracene	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	Benz(a)anthracene	27	1	3.7	80 JT	80 JT	06R004	80	80 JT	80 JT	17 UT	80 JT	34.3	33 UT	33 UT
crayfish	whole-body	Benzo(a)pyrene	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT
crayfish	whole-body	Benzo(b)fluoranthene	27	0	0							17 UT	63 UT	33.7	33 UT	33 UT
crayfish	whole-body	Benzo(g,h,i)perylene	27	0	0							17 UT	70 UT	33.9	33 UT	33 UT
crayfish	whole-body	Benzo(k)fluoranthene	27	0	0							17 UT	77 UT	34.2	33 UT	33 UT
crayfish	whole-body	Chrysene	27	1	3.7	87 T	87 T	06R004	87	87 T	87 T	17 UT	87 T	34.6	33 UT	33 UT
crayfish	whole-body	Fluoranthene	27	3	11.1	93 JT	130 T	06R004	111	110 T	110 T	17 UT	130 T	54.9	33 UT	100 UT
crayfish	whole-body	Indeno(1,2,3-cd)pyrene	27	0	0							17 UT	37 UT	32.6	33 UT	33 UT

Table 4-10. Round 1 Summary Statistics of Chemical Concentrations in Crayfish Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
crayfish	whole-body	Pyrene	27	2	7.41	60 T	83 T	06R004	71.5	60 T	60 T	17 UT	83 T	41.9	33 UT	60 T
crayfish	whole-body	High Molecular Weight PAH	27	3	11.1	93 JT	380 JT	06R004	214	170 T	170 T	17 UT	380 JT	68	33 UT	100 UT
crayfish	whole-body	Polycyclic Aromatic Hydrocarbons	27	3	11.1	93 JT	477 JT	06R004	247	170 T	170 T	33 UT	477 JT	79.9	70 UT	100 UT
		PCB Congeners (pg/g)														
crayfish	whole-body	PCB001	10	5	50	2.38 NJ	10600	06R031	2120	3.6	4.05 J	2.19 U	10600	1060	3.97 U	4.05 J
crayfish	whole-body	PCB002	10	1	10	15.7	15.7	06R031	15.7	15.7	15.7	1.84 U	15.7	4	3.36 U	3.41 U
crayfish	whole-body	PCB003	10	4	40	4.53 J	862	06R031	219	4.73 NJ	4.93 J	2.64 U	862	90.3	4.81 U	4.93 J
crayfish	whole-body	PCB004	10	6	60	7.56 J	10200	06R031	1710	14.1	35.6	7.56 J	10200	1030	12.7 U	35.6
crayfish	whole-body	PCB005	10	0	0							2.39 U	4.43 U	3.39	2.43 U	4.38 U
crayfish	whole-body	PCB006	10	5	50	4.71	541	06R031	121	15.3	33	3.57 U	541	63.5	6.54 U	33
crayfish	whole-body	PCB007	10	1	10	7.88 J	7.88 J	06R031	7.88	7.88 J	7.88 J	3.79 U	7.88 J	5.78	6.9 U	7.02 U
crayfish	whole-body	PCB008	10	6	60	5.48 J	3070	06R031	527	22.1 J	28	5.48 J	3070	320	9.51 U	28
crayfish	whole-body	PCB009	10	5	50	8.41	23.8	06R031	16	16.2	21.1	2.51 U	23.8	10.1	4.64 U	21.1
crayfish	whole-body	PCB010	10	1	10	386	386	06R031	386	386	386	4.82 U	386	45	8.79 U	8.93 U
crayfish	whole-body	PCB011	10	3	30	28.9	118 J	06R031	69.4	61.3	61.3	23.2 U	118 J	46.7	42.2 U	61.3
crayfish	whole-body	PCB012 & 013	10	4	40	6.68 J	30.3 J	06R031	13	7.24 J	7.94 J	5.37 U	30.3 J	10.6	9.74 U	9.9 U
crayfish	whole-body	PCB014	10	0	0							3.14 U	5.81 U	4.45	3.19 U	5.75 U
crayfish	whole-body	PCB015	10	10	100	15.1	478	03R004	174	171	322	15.1	478	174	171	322
crayfish	whole-body	PCB016	10	7	70	6.61	38.7	03R004	17.1	13.1	25.6	6.61	38.7	14.5	8.59	25.6
crayfish	whole-body	PCB017	10	7	70	8.43	537	06R031	101	33.8	45.3	6.76 U	537	72.6	13	45.3
crayfish	whole-body	PCB018 & 030	10	8	80	25.6 J	363 J	03R004	123	87.1 J	172 J	15.4 U	363 J	101	58.2 J	172 J
crayfish	whole-body	PCB019	10	6	60	4.65 J	534	06R031	96.6	8.45	14.9	4.65 J	534	60.8	7.17 U	14.9
crayfish	whole-body	PCB020 & 028	10	10	100	25.1 J	2250 J	02R001	806	383 J	2030 J	25.1 J	2250 J	806	383 J	2030 J
crayfish	whole-body	PCB021 & 033	10	6	60	28.5 J	98.2 J	03R005	63.6	64.5 J	93.8 J	6.51 U	98.2 J	42.4	28.5 J	93.8 J
crayfish	whole-body	PCB022	10	6	60	12.1	51.7	03R004	33.6	33.9	42.7	4.2 U	51.7	22.9	12.1	42.7
crayfish	whole-body	PCB023	10	0	0							3.88 U	7.19 U	5.51	3.95 U	7.12 U
crayfish	whole-body	PCB024	10	0	0							5.02 U	9.3 U	7.13	5.1 U	9.21 U
crayfish	whole-body	PCB025	10	6	60	5.66	38.2	06R031	22.8	21.3	30.1	3.08 U	38.2	15.7	5.7 U	30.1
crayfish	whole-body	PCB026 & 029	10	8	80	22.4 J	219 J	03R004	91.5	80 J	132 J	16.6 U	219 J	76.6	61.9 J	132 J
crayfish	whole-body	PCB027	10	5	50	7.04	159	06R031	38.6	9.4	10.2	3.79 U	159	22.5	7.02 U	10.2
crayfish	whole-body	PCB031	10	9	90	17.7	389	03R004	163	133	324	11.2 U	389	147	112	324
crayfish	whole-body	PCB032	10	7	70	4.87 J	260	06R031	54.5	23.6	32.7	4.87 J	260	40.3	12.3	32.7
crayfish	whole-body	PCB034	10	3	30	3.41	5.96	06R031	4.48	4.07	4.07	3.18 U	5.96	4.89	5.79 U	5.88 U
crayfish	whole-body	PCB035	10	2	20	4.08 J	8.65	03R004	6.37	4.08 J	4.08 J	2.34 U	8.65	4.13	4.27 U	4.34 U
crayfish	whole-body	PCB036	10	0	0							3.93 U	7.28 U	5.58	4 U	7.21 U
crayfish	whole-body	PCB037	10	10	100	31.7	905	03R004	341	161	818	31.7	905	341	161	818
crayfish	whole-body	PCB038	10	0	0							2.92 U	5.41 U	4.15	2.97 U	5.36 U
crayfish	whole-body	PCB039	10	1	10	5.84	5.84	02R001	5.84	5.84	5.84	3.85 U	7.14 U	5.67	5.84	7.07 U
crayfish	whole-body	PCB040 & 041 & 071	10	7	70	12.1 J	108 J	02R001	61	60.7 J	96.1 J	12.1 J	108 J	48.1	28.5 J	96.1 J
crayfish	whole-body	PCB042	10	7	70	10.4	79.7	02R001	45.4	50	71	10.4	79.7	35.1	11.6	71
crayfish	whole-body	PCB043	10	3	30	7.6	17.6	02R001	14.1	17.1	17.1	7.48 U	17.6	12.6	13.6 U	17.1
crayfish	whole-body	PCB044 & 047 & 065	10	9	90	79.6 J	519 J	03R005	285	286 J	425 J	44.5 U	519 J	261	256 J	425 J
crayfish	whole-body	PCB045 & 051	10	6	60	24.4 J	62.9 J	06R031	36.8	29.1 J	43.7 J	11.8 U	62.9 J	29.7	24.4 J	43.7 J
crayfish	whole-body	PCB046	10	3	30	5.94	12.6	02R001	8.79	7.84	7.84	5.11 U	12.6	8.34	9.3 U	9.46 U
crayfish	whole-body	PCB048	10	6	60	8.51	50.9	03R004	33.2	37.6	46.3	8.28 U	50.9	25.2	15.1 U	46.3

Table 4-10. Round 1 Summary Statistics of Chemical Concentrations in Crayfish Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	**Tissue Type**	**Analyte**	**N**	**Detected**	**Detected**	**Minimum**	**Maximum**	**Location**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th UCL**
crayfish	whole-body	PCB049 & 069	10	9	90	26.3 J	293 J	02R001	121	99.3 J	216 J	19.6 U	293 J	111	81.4 J	216 J
crayfish	whole-body	PCB050 & 053	10	5	50	27.2 J	61.5 J	06R031	38.6	32.6 J	44.4 J	11.9 U	61.5 J	29.2	22 U	44.4 J
crayfish	whole-body	PCB052	10	10	100	18.3	660	03R005	227	122	453	18.3	660	227	122	453
crayfish	whole-body	PCB054	10	1	10	17.2	17.2	06R031	17.2	17.2	17.2	4.32 U	17.2	7.42	7.87 U	8.01 U
crayfish	whole-body	PCB055	10	0	0							4.82 U	8.92 U	6.84	4.9 U	8.83 U
crayfish	whole-body	PCB056	10	7	70	6.43	185	02R001	62.7	50.5	95.7	6.43	185	45.8	14.4	95.7
crayfish	whole-body	PCB057	10	4	40	5.4	9.9	03R004	7.43	6.87	7.55	4.95 U	9.9	7.93	8.87 U	9.02 U
crayfish	whole-body	PCB058	10	2	20	8.49	9.32	03R004	8.91	8.49	8.49	5.97 U	11.1 U	9.06	9.32	10.9 U
crayfish	whole-body	PCB059 & 062 & 075	10	4	40	14.4 J	31 J	03R004	26.2	28.7 J	30.5 J	10.9 U	31 J	21.5	19.9 U	30.5 J
crayfish	whole-body	PCB060	10	10	100	7.47	1230	02R001	225	95.4	239	7.47	1230	225	95.4	239
crayfish	whole-body	PCB061 & 070 & 074 & 076	10	10	100	108 J	5360 J	02R001	1430	762 J	2010 J	108 J	5360 J	1430	762 J	2010 J
crayfish	whole-body	PCB063	10	10	100	21.3	319	02R001	96.5	60.4	157	21.3	319	96.5	60.4	157
crayfish	whole-body	PCB064	10	8	80	9.56	120	02R001	49.7	26.5	79.7	9.23 U	120	41.6	15	79.7
crayfish	whole-body	PCB066	10	10	100	156	7680	02R001	1700	966	1880	156	7680	1700	966	1880
crayfish	whole-body	PCB067	10	4	40	13.8	34.4	03R004	23.4	22.4	23.1	7.09 U	34.4	16.5	12.8 U	23.1
crayfish	whole-body	PCB068	10	8	80	12.6	30.4	03R005	19.9	17.8	24.5	9.36 U	30.4	17.8	16.9	24.5
crayfish	whole-body	PCB072	10	5	50	5.73	22.2	03R005	11.7	10.4	11.8	5.73	22.2	10.7	9.64 U	11.8
crayfish	whole-body	PCB073	10	0	0							6.29 U	11.6 U	8.93	6.39 U	11.5 U
crayfish	whole-body	PCB077	10	10	100	25.4	945	02R001	195	103	209	25.4	945	195	103	209
crayfish	whole-body	PCB078	10	0	0							4.12 U	7.64 U	5.85	4.19 U	7.56 U
crayfish	whole-body	PCB079	10	7	70	6.45	39.8	03R005	15.5	9.94	21.5	2.77 U	39.8	12.1	6.67	21.5
crayfish	whole-body	PCB080	10	0	0							6.06 U	11.2 U	8.6	6.17 U	11.1 U
crayfish	whole-body	PCB081	10	10	100	1.54	42.9	02R001	8.99	4.12	10.1	1.54	42.9	8.99	4.12	10.1
crayfish	whole-body	PCB082	10	5	50	8.63	49.2	02R001	29.3	24	46.6	5.81 U	49.2	19.4	10.5 U	46.6
crayfish	whole-body	PCB083 & 099	10	10	100	65.2 J	3250 J	02R001	1140	607 J	2910 J	65.2 J	3250 J	1140	607 J	2910 J
crayfish	whole-body	PCB084	10	7	70	9.39	120	03R005	39	33.6	49.1	9.39	120	32.4	17.1 U	49.1
crayfish	whole-body	PCB085 & 116 & 117	10	10	100	39.1 J	513 J	02R001	177	103 J	408 J	39.1 J	513 J	177	103 J	408 J
crayfish	whole-body	PCB086 & 087 & 097 & 108 & 119 & 125	10	9	90	75.3 J	852 J	03R005	268	176 J	447 J	30.2 U	852 J	244	139 J	447 J
crayfish	whole-body	PCB088 & 091	10	7	70	10.9 J	93.4 J	03R005	36.4	27.4 J	41.4 J	10.9 J	93.4 J	30.3	23.7 J	41.4 J
crayfish	whole-body	PCB089	10	0	0							4.8 U	8.89 U	6.81	4.88 U	8.8 U
crayfish	whole-body	PCB090 & 101 & 113	10	10	100	83.7 J	1710 J	03R005	527	369 J	731 J	83.7 J	1710 J	527	369 J	731 J
crayfish	whole-body	PCB092	10	9	90	33.8	301	03R005	89.7	72.1	87.8	10.4 U	301	81.7	67.6	87.8
crayfish	whole-body	PCB093 & 095 & 098 & 100 & 102	10	9	90	101 J	924 J	03R005	252	183 J	236 J	41.1 U	924 J	231	147 J	236 J
crayfish	whole-body	PCB094	10	0	0							4.88 U	9.03 U	6.92	4.96 U	8.95 U
crayfish	whole-body	PCB096	10	0	0							6.4 U	11.9 U	9.1	6.51 U	11.7 U
crayfish	whole-body	PCB103	10	6	60	5.18	22.1	03R005	13.7	9.88	21	4.51 U	22.1	11.2	8.25 U	21
crayfish	whole-body	PCB104	10	0	0							7.38 U	13.7 U	10.5	7.5 U	13.5 U
crayfish	whole-body	PCB105	10	10	100	57.5	2520	02R001	717	356	1860	57.5	2520	717	356	1860
crayfish	whole-body	PCB106	10	0	0							9.71 U	18 U	13.8	9.87 U	17.8 U
crayfish	whole-body	PCB107 & 124	10	4	40	32 J	107 J	03R005	62.4	41.8 J	68.7 J	19.4 U	107 J	44.3	34.8 U	68.7 J
crayfish	whole-body	PCB109	10	10	100	87.1	775	02R001	285	190	557	87.1	775	285	190	557
crayfish	whole-body	PCB110 & 115	10	10	100	29.6 J	602 J	03R005	154	79.8 J	302 J	29.6 J	602 J	154	79.8 J	302 J
crayfish	whole-body	PCB111	10	1	10	15.8	15.8	09R002	15.8	15.8	15.8	5.61 U	15.8	8.51	5.7 U	10.4 U
crayfish	whole-body	PCB112	10	0	0							6.91 U	12.8 U	9.81	7.02 U	12.7 U
crayfish	whole-body	PCB114	10	10	100	33.9	387	02R001	108	56.9	180	33.9	387	108	56.9	180

Table 4-10. Round 1 Summary Statistics of Chemical Concentrations in Crayfish Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
crayfish	whole-body	PCB118	10	10	100	1020	9630	02R001	3360	2010	7820	1020	9630	3360	2010	7820
crayfish	whole-body	PCB120	10	9	90	10.2	48.8	09R002	20	15	31	7.29 U	48.8	18.7	14.4	31
crayfish	whole-body	PCB121	10	0	0							4.06 U	7.52 U	5.76	4.13 U	7.44 U
crayfish	whole-body	PCB122	10	3	30	35.8	55.8	02R001	48.6	54.2	54.2	11.7 U	55.8	27.6	21.2 U	54.2
crayfish	whole-body	PCB123	10	10	100	25	315	02R001	89.3	50.3	179	25	315	89.3	50.3	179
crayfish	whole-body	PCB126	10	10	100	1.84	25.9	02R001	9.39	6.15	22.3	1.84	25.9	9.39	6.15	22.3
crayfish	whole-body	PCB127	10	2	20	14	17.9	03R005	16	14	14	9.56 U	17.9	14.8	17.3 U	17.6 U
crayfish	whole-body	PCB128 & 166	10	9	90	18.5 J	192 J	03R005	64.4	45.7 J	101 J	13.3 U	192 J	59.3	37.9 J	101 J
crayfish	whole-body	PCB129 & 138 & 160 & 163	10	10	100	1110 J	14700 J	03R005	3910	2130 J	5800 J	1110 J	14700 J	3910	2130 J	5800 J
crayfish	whole-body	PCB130	10	10	100	18.2	503	03R005	146	111	182	18.2	503	146	111	182
crayfish	whole-body	PCB131	10	2	20	6.75	22.3	03R005	14.5	6.75	6.75	6.08 U	22.3	10.3	11.1 U	11.3 U
crayfish	whole-body	PCB132	10	10	100	15.3	270	03R005	71.1	47.7	107	15.3	270	71.1	47.7	107
crayfish	whole-body	PCB133	10	10	100	21.9	257	03R005	97.2	59.6	205	21.9	257	97.2	59.6	205
crayfish	whole-body	PCB134 & 143	10	7	70	16.1 J	141 J	03R005	47.9	24.5 J	60.9 J	16.1 J	141 J	39.2	19.1 U	60.9 J
crayfish	whole-body	PCB135 & 151 & 154	10	9	90	105 J	847 J	03R005	333	231 J	691 J	30.2 U	847 J	303	189 J	691 J
crayfish	whole-body	PCB136	10	10	100	7.29	134	03R005	42.9	25.5	95.4	7.29	134	42.9	25.5	95.4
crayfish	whole-body	PCB137	10	10	100	93.6	838	03R005	285	168	459	93.6	838	285	168	459
crayfish	whole-body	PCB139 & 140	10	4	40	13.6 J	54.8 J	03R005	31.3	25.6 J	31.3 J	8.6 U	54.8 J	21.1	15.4 U	31.3 J
crayfish	whole-body	PCB141	10	7	70	48.1	513	03R005	166	94.2	219	8.37 U	513	119	63.6	219
crayfish	whole-body	PCB142	10	0	0							5.99 U	11.1 U	8.5	6.09 U	11 U
crayfish	whole-body	PCB144	10	9	90	16.4	136	03R005	43.3	30.7	50.8	8.24 U	136	39.8	22.4	50.8
crayfish	whole-body	PCB145	10	0	0							2.35 U	4.36 U	3.34	2.39 U	4.31 U
crayfish	whole-body	PCB146	10	10	100	430	4880	03R005	1600	900	3070	430	4880	1600	900	3070
crayfish	whole-body	PCB147 & 149	10	10	100	76.4 J	1750 J	03R005	521	353 J	895 J	76.4 J	1750 J	521	353 J	895 J
crayfish	whole-body	PCB148	10	2	20	5.66	9.92	09R002	7.79	5.66	5.66	4.82 U	9.92	7.03	5.66	8.92 U
crayfish	whole-body	PCB150	10	2	20	3.98	4.51	09R002	4.25	3.98	3.98	2.15 U	4.51	3.29	3.92 U	3.99 U
crayfish	whole-body	PCB152	10	0	0							5.68 U	10.5 U	8.07	5.78 U	10.4 U
crayfish	whole-body	PCB153 & 168	10	10	100	2280 J	30700 J	03R005	8450	4550 J	12400 J	2280 J	30700 J	8450	4550 J	12400 J
crayfish	whole-body	PCB155	10	0	0							4.31 U	7.98 U	6.11	4.38 U	7.9 U
crayfish	whole-body	PCB156	10	10	100	207	1790	03R005	592	458	730	207	1790	592	458	730
crayfish	whole-body	PCB157	10	10	100	26.9	258	03R005	79.8	49.9	121	26.9	258	79.8	49.9	121
crayfish	whole-body	PCB158	10	9	90	45.4	567	03R005	137	69.6	158	8.88 U	567	124	66.5	158
crayfish	whole-body	PCB159	10	4	40	10.4	48	03R005	26.6	18.6	29.3	5.28 U	48	15.1	9.64 U	29.3
crayfish	whole-body	PCB161	10	0	0							6.63 U	12.3 U	9.42	6.74 U	12.2 U
crayfish	whole-body	PCB162	10	6	60	14.6	49.5	03R005	25.3	21.4	26	8.07 U	49.5	20.3	14.7 U	26
crayfish	whole-body	PCB164	10	9	90	15.7	215	03R005	66.2	47	94.2	12 U	215	60.8	46.1	94.2
crayfish	whole-body	PCB165	10	3	30	6.12	15.8	09R002	10.1	8.33	8.33	5.5 U	15.8	8.69	8.33	10.1 U
crayfish	whole-body	PCB167	10	10	100	126	1050	03R005	348	230	647	126	1050	348	230	647
crayfish	whole-body	PCB169	10	3	30	0.819	1.67	09R002	1.34	1.54	1.54	0.722 U	1.67	0.911	0.729 U	1.54
crayfish	whole-body	PCB170	10	10	100	259	7420	03R005	1600	675	2410	259	7420	1600	675	2410
crayfish	whole-body	PCB171 & 173	10	9	90	38.6 J	674 J	03R005	161	91.9 J	215 J	27.7 U	674 J	148	69 J	215 J
crayfish	whole-body	PCB172	10	10	100	23.6	699	03R005	171	102	237	23.6	699	171	102	237
crayfish	whole-body	PCB174	10	10	100	17.8	884	03R005	258	95.8	534	17.8	884	258	95.8	534
crayfish	whole-body	PCB175	10	8	80	15.8	278	03R005	70.7	31.8	91.4	15.8	278	60.4	19.6	91.4
crayfish	whole-body	PCB176	10	9	90	7.34	71.9	03R005	26.4	15.9	46.6	6.9 U	71.9	24.5	11.7	46.6

Table 4-10. Round 1 Summary Statistics of Chemical Concentrations in Crayfish Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
crayfish	whole-body	PCB177	10	10	100	127	1880	03R005	542	194	1060	127	1880	542	194	1060
crayfish	whole-body	PCB178	10	10	100	15.8	2160	03R005	403	95.3	808	15.8	2160	403	95.3	808
crayfish	whole-body	PCB179	10	9	90	12.2	149	03R005	55.9	37.2	128	11.8 U	149	51.5	25.6	128
crayfish	whole-body	PCB180 & 193	10	10	100	1470 J	44900 J	03R005	11000	3540 J	23800 J	1470 J	44900 J	11000	3540 J	23800 J
crayfish	whole-body	PCB181	10	8	80	9	65.4	07R006	26.1	13.9	39.5	9	65.4	23.6	13.5 U	39.5
crayfish	whole-body	PCB182	10	0	0							7.95 U	14.7 U	11.3	8.08 U	14.6 U
crayfish	whole-body	PCB183 & 185	10	10	100	199 J	5770 J	03R005	1150	442 J	1690 J	199 J	5770 J	1150	442 J	1690 J
crayfish	whole-body	PCB184	10	0	0							7.01 U	13 U	9.96	7.13 U	12.9 U
crayfish	whole-body	PCB186	10	0	0							4.04 U	7.48 U	5.73	4.11 U	7.41 U
crayfish	whole-body	PCB187	10	10	100	878	27300	03R005	6460	2080	12500	878	27300	6460	2080	12500
crayfish	whole-body	PCB188	10	0	0							7.63 U	14.1 U	10.8	7.76 U	14 U
crayfish	whole-body	PCB189	10	10	100	22.3	405	03R005	115	49.4	285	22.3	405	115	49.4	285
crayfish	whole-body	PCB190	10	10	100	63.9	1340	03R005	323	120	498	63.9	1340	323	120	498
crayfish	whole-body	PCB191	10	10	100	26.8	602	03R005	147	49.6	266	26.8	602	147	49.6	266
crayfish	whole-body	PCB192	10	0	0							3.64 U	6.75 U	5.17	3.7 U	6.68 U
crayfish	whole-body	PCB194	10	10	100	138	6460	03R005	1240	382	1750	138	6460	1240	382	1750
crayfish	whole-body	PCB195	10	10	100	52.5	2390	03R005	460	151	630	52.5	2390	460	151	630
crayfish	whole-body	PCB196	10	10	100	91	4320	03R005	828	216	1240	91	4320	828	216	1240
crayfish	whole-body	PCB197 & 200	10	8	80	13.8 J	349 J	03R005	79	28.5 J	110 J	13.8 J	349 J	67	19.9 J	110 J
crayfish	whole-body	PCB198 & 199	10	10	100	164 J	7550 J	03R005	1390	372 J	2390 J	164 J	7550 J	1390	372 J	2390 J
crayfish	whole-body	PCB201	10	10	100	24.2	1020	03R005	189	51.7	335	24.2	1020	189	51.7	335
crayfish	whole-body	PCB202	10	9	90	19.6	649	03R005	137	43.6	286	18.2 U	649	126	39.3	286
crayfish	whole-body	PCB203	10	10	100	47.1	711	03R005	201	88.8	304	47.1	711	201	88.8	304
crayfish	whole-body	PCB204	10	0	0							9.63 U	17.8 U	13.7	9.8 U	17.7 U
crayfish	whole-body	PCB205	10	5	50	13.1	89.5	03R005	36.6	25.2	34.3	10.5 U	89.5	26.2	19.3 U	34.3
crayfish	whole-body	PCB206	10	10	100	24.2	394	03R005	101	59.1	133	24.2	394	101	59.1	133
crayfish	whole-body	PCB207	10	9	90	13.2	289	03R005	64.5	32.5	69.9	11.5 U	289	59.2	22	69.9
crayfish	whole-body	PCB208	10	10	100	14.8	247	03R005	56.6	29	80.5	14.8	247	56.6	29	80.5
crayfish	whole-body	PCB209	10	10	100	25.6	108	07R006	49.3	33.6	88.7	25.6	108	49.3	33.6	88.7
		Dioxins/Furans (pg/g)														
crayfish	whole-body	Tetrachlorodibenzo-p-dioxin	10	10	100	0.329	0.947	06R004	0.663	0.617	0.844	0.329	0.947	0.663	0.617	0.844
crayfish	whole-body	Pentachlorodibenzo-p-dioxin	10	10	100	0.285	1.34	08R003	0.653	0.57	1.1	0.285	1.34	0.653	0.57	1.1
crayfish	whole-body	Hexachlorodibenzo-p-dioxin	10	10	100	0.838	3.98	07R006	2.23	1.75	3.94	0.838	3.98	2.23	1.75	3.94
crayfish	whole-body	Heptachlorodibenzo-p-dioxin	10	10	100	2.37	22.6	06R004	8.75	5.83	16.1	2.37	22.6	8.75	5.83	16.1
crayfish	whole-body	Octachlorodibenzo-p-dioxin	10	10	100	7.72	57.2	06R031	21.6	17.5	30	7.72	57.2	21.6	17.5	30
crayfish	whole-body	Tetrachlorodibenzofuran	10	10	100	2.66	105	07R006	14.3	3.57	7.24	2.66	105	14.3	3.57	7.24
crayfish	whole-body	Pentachlorodibenzofuran	10	10	100	1.48	89.2	07R006	14.9	4.07	18.3	1.48	89.2	14.9	4.07	18.3
crayfish	whole-body	Hexachlorodibenzofuran	10	10	100	0.464	34.6	07R006	6.01	1.65	11.5	0.464	34.6	6.01	1.65	11.5
crayfish	whole-body	Heptachlorodibenzofuran	10	10	100	0.525	8.62	07R006	2.02	1.02	3.62	0.525	8.62	2.02	1.02	3.62
crayfish	whole-body	Octachlorodibenzofuran	10	9	90	0.377	6.08	07R006	1.61	1.19	1.79	0.307 U	6.08	1.48	0.89	1.79
crayfish	whole-body	2,3,7,8-Tetrachlorodibenzo-p-dioxin	10	10	100	0.077	0.252	06R004	0.162	0.159	0.228	0.077	0.252	0.162	0.159	0.228
crayfish	whole-body	2,3,7,8-TCDD TEQ	10	10	100	1.84 T	23.8 T	07R006	5.00	2.37 T	5.06 T	1.84 T	23.8 T	5.00	2.37 T	5.06 T
crayfish	whole-body	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	10	10	100	0.149	0.439	06R031	0.241	0.19	0.388	0.149	0.439	0.241	0.19	0.388
crayfish	whole-body	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	10	10	100	0.029	0.131	08R003	0.0645	0.047	0.102	0.029	0.131	0.0645	0.047	0.102
crayfish	whole-body	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	10	10	100	0.155	1.26	06R031	0.44	0.301	0.717	0.155	1.26	0.44	0.301	0.717

Table 4-10. Round 1 Summary Statistics of Chemical Concentrations in Crayfish Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
crayfish	whole-body	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	10	10	100	0.061	0.22	09R002	0.139	0.111	0.199	0.061	0.22	0.139	0.111	0.199
crayfish	whole-body	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	10	10	100	0.992	8.73	06R031	3.18	2.64	4.17	0.992	8.73	3.18	2.64	4.17
crayfish	whole-body	2,3,7,8-Tetrachlorodibenzofuran	10	10	100	0.551	79.2	07R006	9.26	0.875	4.02	0.551	79.2	9.26	0.875	4.02
crayfish	whole-body	1,2,3,7,8-Pentachlorodibenzofuran	10	10	100	0.13	36.8	07R006	4.27	0.251	2.34	0.13	36.8	4.27	0.251	2.34
crayfish	whole-body	2,3,4,7,8-Pentachlorodibenzofuran	10	10	100	0.191	18.7	07R006	2.41	0.433	1.5	0.191	18.7	2.41	0.433	1.5
crayfish	whole-body	1,2,3,4,7,8-Hexachlorodibenzofuran	10	9	90	0.138	23.2	07R006	3.15	0.249	2.85	0.066 U	23.2	2.84	0.241	2.85
crayfish	whole-body	1,2,3,6,7,8-Hexachlorodibenzofuran	10	7	70	0.084	4.72	07R006	0.889	0.192	0.627	0.038 U	4.72	0.641	0.099	0.627
crayfish	whole-body	1,2,3,7,8,9-Hexachlorodibenzofuran	10	3	30	0.015	0.339	07R006	0.138	0.059	0.059	0.011 U	0.339	0.049	0.011 U	0.059
crayfish	whole-body	2,3,4,6,7,8-Hexachlorodibenzofuran	10	10	100	0.033 J	0.79	07R006	0.15	0.051	0.265	0.033 J	0.79	0.15	0.051	0.265
crayfish	whole-body	1,2,3,4,6,7,8-Heptachlorodibenzofuran	10	9	90	0.293	4.71	07R006	1.04	0.493	1.67	0.19 U	4.71	0.953	0.484	1.67
crayfish	whole-body	1,2,3,4,7,8,9-Heptachlorodibenzofuran	10	9	90	0.026	2.15	07R006	0.278	0.037	0.117	0.016 U	2.15	0.252	0.029	0.117

Notes:

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table 4-11. Round 1 Summary Statistics of Chemical Concentrations in Largescale Sucker Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
		Conventionals (percent)														
largescale sucker	whole-body	Total solids	6	6	100	26.6	30.3	03R014	28.8	28.8	29.8	26.6	30.3	28.8	28.8	29.8
largescale sucker	whole-body	Lipids	6	6	100	5.4 T	8.7 T	03R014	7.56	7.5 T	8.63 T	5.4 T	8.7 T	7.56	7.5 T	8.63 T
		Metals (mg/kg)														
largescale sucker	whole-body	Aluminum	6	6	100	76.9 J	154 J	08R010	127	133 J	150 J	76.9 J	154 J	127	133 J	150 J
largescale sucker	whole-body	Antimony	6	6	100	0.001 J	0.003 J	09R006	0.00225	0.002 J	0.003 J	0.001 J	0.003 J	0.00225	0.002 J	0.003 J
largescale sucker	whole-body	Arsenic	6	6	100	0.18	0.27	05R006	0.233	0.225 T	0.27	0.18	0.27	0.233	0.225 T	0.27
largescale sucker	whole-body	Cadmium	6	6	100	0.015 J	0.0325 JT	08R010	0.0206	0.017 J	0.023 J	0.015 J	0.0325 JT	0.0206	0.017 J	0.023 J
largescale sucker	whole-body	Chromium	6	6	100	0.38	2.77 T	08R010	1.12	0.6	1.76	0.38	2.77 T	1.12	0.6	1.76
largescale sucker	whole-body	Copper	6	6	100	0.735	1.1 T	08R010	0.901	0.905	0.918	0.735	1.1 T	0.901	0.905	0.918
largescale sucker	whole-body	Lead	6	6	100	0.064	0.191 T	08R010	0.122	0.102	0.175	0.064	0.191 T	0.122	0.102	0.175
largescale sucker	whole-body	Manganese	6	6	100	10.7 J	13.4 J	05R006	12.2	11.9 J	13 J	10.7 J	13.4 J	12.2	11.9 J	13 J
largescale sucker	whole-body	Mercury	6	6	100	0.045	0.085	07R009	0.0677	0.066 T	0.079	0.045	0.085	0.0677	0.066 T	0.079
largescale sucker	whole-body	Nickel	6	6	100	0.29	0.81	09R006	0.463	0.39	0.565 T	0.29	0.81	0.463	0.39	0.565 T
largescale sucker	whole-body	Selenium	6	0	0							0.3 U	0.3 U	0.3	0.3 U	0.3 UT
largescale sucker	whole-body	Silver	6	0	0							0.0003 UJ	0.0074 UJ	0.00533	0.006 UJ	0.0074 UJ
largescale sucker	whole-body	Thallium	6	6	100	0.0015 J	0.0038 J	03R014	0.00248	0.0021 J	0.0031 J	0.0015 J	0.0038 J	0.00248	0.0021 J	0.0031 J
largescale sucker	whole-body	Zinc	6	6	100	17.1	19.7 T	08R010	17.9	17.7	17.9	17.1	19.7 T	17.9	17.7	17.9
		PCB Aroclors (ug/kg)														
largescale sucker	whole-body	Aroclor 1016	6	0	0							1.9 U	78 U	30.9	7.6 U	52 U
largescale sucker	whole-body	Aroclor 1242	6	0	0							1.9 U	120 U	41.5	7.6 U	74 U
largescale sucker	whole-body	Aroclor 1248	6	4	66.7	45	1400 J	03R014	479	170	300	45	1400 J	398	220 U	300
largescale sucker	whole-body	Aroclor 1254	6	0	0							61 U	1500 UJ	617	390 U	950 U
largescale sucker	whole-body	Aroclor 1260	6	6	100	50	1400	07R009	500	320	620 J	50	1400	500	320	620 J
largescale sucker	whole-body	Aroclor 1262	6	0	0							1.9 U	38 U	16.8	7.6 U	38 UJ
largescale sucker	whole-body	Aroclor 1268	6	0	0							1.9 U	38 U	16.8	7.6 U	38 UJ
largescale sucker	whole-body	Aroclor 1221	6	0	0							1.9 U	140 U	43.2	7.6 U	64 U
largescale sucker	whole-body	Aroclor 1232	6	0	0							1.9 U	150 U	48.5	7.6 U	86 U
largescale sucker	whole-body	Total PCB Aroclors	6	6	100	95 T	2020 JT	03R014	819	350 T	1400 T	95 T	2020 JT	819	350 T	1400 T
		Organochlorine Pesticides (ug/kg)														
largescale sucker	whole-body	2,4'-DDD	6	2	33.3	16 NJ	40 T	08R010	28	16 NJ	16 NJ	7.8 U	40 T	14.9	8.6 UT	16 NJ
largescale sucker	whole-body	2,4'-DDE	6	0	0							1 U	7.5 UT	4.53	4 U	6.7 UT
largescale sucker	whole-body	2,4'-DDT	6	3	50	9.3 NJ	50 T	08R010	24.4	14 NJ	14 NJ	6.9 UT	50 T	15.7	6.9 UT	14 NJ
largescale sucker	whole-body	4,4'-DDD	6	6	100	20	150 T	08R010	54.4	31 J	57 T	20	150 T	54.4	31 J	57 T
largescale sucker	whole-body	4,4'-DDE	6	6	100	79	185 T	08R010	121	96 JT	160 T	79	185 T	121	96 JT	160 T
largescale sucker	whole-body	4,4'-DDT	6	5	83.3	17 JT	245 T	08R010	70.4	31 T	32 J	6.3 UT	245 T	59.7	27	32 J
largescale sucker	whole-body	Total of 3 isomers: pp-DDT,-DDD,-DDE	6	6	100	126 T	580 T	08R010	235	156 JT	218 JT	126 T	580 T	235	156 JT	218 JT
largescale sucker	whole-body	Aldrin	6	0	0							1 U	13 UT	5	4 U	4 UT
largescale sucker	whole-body	alpha-Hexachlorocyclohexane	6	0	0							1 U	6.4 UT	3.9	4 U	4 UT
largescale sucker	whole-body	beta-Hexachlorocyclohexane	6	0	0							3.3 UJ	8.5 UT	4.67	4 UT	4.2 U
largescale sucker	whole-body	delta-Hexachlorocyclohexane	6	0	0							1 U	7.3 UT	4.05	4 U	4 UT
largescale sucker	whole-body	gamma-Hexachlorocyclohexane	6	1	16.7	4.5 NJ	4.5 NJ	03R014	4.5	4.5 NJ	4.5 NJ	3.5 U	9.6 UT	4.93	4 UT	4.5 NJ
largescale sucker	whole-body	cis-Chlordane	6	0	0							2 U	20 U	6.35	4 U	4.1 U

Table 4-11. Round 1 Summary Statistics of Chemical Concentrations in Largescale Sucker Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	**Tissue Type**	**Analyte**	**N**	**Detected**	**Detected**	**Minimum**	**Maximum**	**Location**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th UCL**
largescale sucker	whole-body	trans-Chlordane	6	0	0							1 U	8.4 UT	4.97	4 UT	8.4 UT
largescale sucker	whole-body	Oxychlordane	6	1	16.7	2.3 N	2.3 N	05R006	2.3	2.3 N	2.3 N	2.3 N	20 UT	6.38	4 U	4 UT
largescale sucker	whole-body	cis-Nonachlor	6	0	0							7.1 UT	17 U	9.4	7.1 UT	11 U
largescale sucker	whole-body	trans-Nonachlor	6	2	33.3	6.3 NJ	9.6 NJ	03R014	7.95	6.3 NJ	6.3 NJ	4 UT	11 UT	8.55	9.4 UT	11 UT
largescale sucker	whole-body	Dieldrin	6	0	0							1 U	14 UT	7.67	5.1 U	14 UT
largescale sucker	whole-body	alpha-Endosulfan	6	1	16.7	11 N	11 N	03R014	11	11 N	11 N	1.4 U	20 U	7.4	4 U	11 N
largescale sucker	whole-body	beta-Endosulfan	6	0	0							1.2 U	15 UT	5.38	4 UT	4.1 UT
largescale sucker	whole-body	Endosulfan sulfate	6	0	0							1.3 U	12 UT	4.88	4 U	4 UT
largescale sucker	whole-body	Endrin	6	0	0							1 U	31 UT	10.7	4 UT	20 UT
largescale sucker	whole-body	Endrin aldehyde	6	0	0							2 U	8.5 UT	4.42	4 U	4 UT
largescale sucker	whole-body	Endrin ketone	6	0	0							1 U	7.5 UT	4.08	4 U	4 UT
largescale sucker	whole-body	Heptachlor	6	0	0							1 U	13 UT	5	4 U	4 UT
largescale sucker	whole-body	Heptachlor epoxide	6	0	0							1 U	8 UT	4.17	4 U	4 UT
largescale sucker	whole-body	Methoxychlor	6	0	0							2.5 U	4.8 UT	4.15	4 UT	4.8 UT
largescale sucker	whole-body	Mirex	6	0	0							1 U	6.2 UT	3.87	4 U	4 UT
largescale sucker	whole-body	Toxaphene	6	0	0							200 U	3500 U	1170	580 U	1400 U
		Semivolatile Organic Compounds (ug/kg)														
largescale sucker	whole-body	1,2,4-Trichlorobenzene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	1,2-Dichlorobenzene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	1,2-Diphenylhydrazine	6	0	0							26 U	33 U	28.8	26 U	32 U
largescale sucker	whole-body	1,3-Dichlorobenzene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	1,4-Dichlorobenzene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Azobenzene	6	0	0							130 U	170 U	145	130 U	160 U
largescale sucker	whole-body	Bis(2-chloro-1-methylethyl) ether	6	0	0							130 U	170 U	145	130 U	160 U
largescale sucker	whole-body	2,4-Dinitrotoluene	6	0	0							26 UT	66 UT	34.3	26 UT	32 UT
largescale sucker	whole-body	2,6-Dinitrotoluene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	2-Chloronaphthalene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	2-Nitroaniline	6	0	0							650 U	830 U	723	660 U	810 U
largescale sucker	whole-body	3,3'-Dichlorobenzidine	6	0	0							1300 U	1700 U	1450	1300 U	1600 U
largescale sucker	whole-body	3-Nitroaniline	6	0	0							650 U	830 U	723	660 U	810 U
largescale sucker	whole-body	4-Bromophenyl phenyl ether	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	4-Chloroaniline	6	0	0							130 UT	170 UT	145	130 UT	160 UT
largescale sucker	whole-body	4-Chlorophenyl phenyl ether	6	0	0							65 UT	83 UT	72.3	66 UT	81 UT
largescale sucker	whole-body	4-Nitroaniline	6	0	0							650 U	830 U	723	660 U	810 U
largescale sucker	whole-body	Benzyl alcohol	6	0	0							260 U	330 U	288	260 U	320 U
largescale sucker	whole-body	Bis(2-chloroethoxy) methane	6	0	0							130 U	170 U	145	130 U	160 U
largescale sucker	whole-body	Bis(2-chloroethyl) ether	6	0	0							26 UT	95 UT	40.3	30 UT	33 UT
largescale sucker	whole-body	Carbazole	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Dibenzofuran	6	0	0							26 UT	39 UT	33.3	33 UT	36 UT
largescale sucker	whole-body	Hexachlorobenzene	6	0	0							4 UT	32 UT	9.07	4 UT	6.4 UT
largescale sucker	whole-body	Hexachlorobutadiene	6	0	0							1.1 UJT	4.6 UT	3.62	4 UT	4 UT
largescale sucker	whole-body	Hexachlorocyclopentadiene	6	0	0							650 U	830 U	723	660 U	810 U
largescale sucker	whole-body	Hexachloroethane	6	0	0							2.6 UJT	33 UT	13.1	13 UT	13 UT

Table 4-11. Round 1 Summary Statistics of Chemical Concentrations in Largescale Sucker Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
largescale sucker	whole-body	Nitrobenzene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	N-Nitrosodimethylamine	6	0	0							130 UJT	170 UJT	145	130 UJT	160 UJT
largescale sucker	whole-body	N-Nitrosodipropylamine	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	N-Nitrosodiphenylamine	6	0	0							130 U	170 U	145	130 U	160 U
		Phenols (ug/kg)														
largescale sucker	whole-body	2,4,5-Trichlorophenol	6	0	0							650 U	830 U	723	660 U	810 U
largescale sucker	whole-body	2,4,6-Trichlorophenol	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	2,4-Dichlorophenol	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	2,4-Dimethylphenol	6	0	0							390 U	500 U	435	390 U	490 U
largescale sucker	whole-body	2,4-Dinitrophenol	6	0	0							2600 UJ	3300 U	2880	2600 UJ	3200 UJ
largescale sucker	whole-body	2-Chlorophenol	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	2-Methylphenol	6	0	0							130 U	170 U	145	130 U	160 U
largescale sucker	whole-body	4,6-Dinitro-2-methylphenol	6	0	0							2600 U	3300 U	2880	2600 U	3200 U
largescale sucker	whole-body	4-Chloro-3-methylphenol	6	0	0							260 U	330 U	288	260 U	320 U
largescale sucker	whole-body	4-Methylphenol	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	4-Nitrophenol	6	0	0							1300 U	1700 U	1450	1300 U	1600 U
largescale sucker	whole-body	Pentachlorophenol	6	0	0							130 UT	170 UT	145	130 UT	160 UT
largescale sucker	whole-body	Phenol	6	0	0							260 U	330 U	288	260 U	320 U
largescale sucker	whole-body	2,3,4,5-Tetrachlorophenol	6	0	0							1300 U	1700 U	1450	1300 U	1600 U
largescale sucker	whole-body	2,3,5,6-Tetrachlorophenol	6	0	0							1300 U	1700 U	1450	1300 U	1600 U
		Phthalates (ug/kg)														
largescale sucker	whole-body	Dimethyl phthalate	6	0	0							130 U	170 U	145	130 U	160 U
largescale sucker	whole-body	Diethyl phthalate	6	0	0							130 U	1600 U	383	130 U	160 U
largescale sucker	whole-body	Dibutyl phthalate	6	0	0							260 U	520 U	320	260 U	320 U
largescale sucker	whole-body	Butylbenzyl phthalate	6	0	0							260 U	330 U	288	260 U	320 U
largescale sucker	whole-body	Di-n-octyl phthalate	6	0	0							260 U	1100 U	417	260 U	320 U
largescale sucker	whole-body	Bis(2-ethylhexyl) phthalate	6	2	33.3	800 T	3000 JT	08R010	1900	800 T	800 T	78 UT	3000 JT	692	97 UT	800 T
		PAHs (ug/kg)														
largescale sucker	whole-body	2-Methylnaphthalene	6	1	16.7	49 T	49 T	07R009	49	49 T	49 T	26 UT	49 T	32.7	30 UT	33 UT
largescale sucker	whole-body	Acenaphthene	6	0	0							26 UT	65 UT	36.5	30 UT	39 UT
largescale sucker	whole-body	Acenaphthylene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Anthracene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Fluorene	6	2	33.3	42 JT	44 JT	07R009	43	42 JT	42 JT	26 UT	44 JT	33.5	30 UT	42 JT
largescale sucker	whole-body	Naphthalene	6	1	16.7	54 T	54 T	07R009	54	54 T	54 T	26 UT	54 T	33.5	30 UT	33 UT
largescale sucker	whole-body	Phenanthrene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Low Molecular Weight PAH	6	2	33.3	42 JT	147 JT	07R009	94.5	42 JT	42 JT	26 UT	147 JT	50.7	30 UT	42 JT
largescale sucker	whole-body	Dibenz(a,h)anthracene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Benz(a)anthracene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Benzo(a)pyrene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Benzo(b)fluoranthene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Benzo(g,h,i)perylene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Benzo(k)fluoranthene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Chrysene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT

Table 4-11. Round 1 Summary Statistics of Chemical Concentrations in Largescale Sucker Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	**Tissue Type**	**Analyte**	**N**	**Detected**	**Detected**	**Minimum**	**Maximum**	**Location**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th UCL**
largescale sucker	whole-body	Fluoranthene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Indeno(1,2,3-cd)pyrene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Pyrene	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	High Molecular Weight PAH	6	0	0							26 UT	33 UT	28.8	26 UT	32 UT
largescale sucker	whole-body	Polycyclic Aromatic Hydrocarbons	6	2	33.3	42 JT	147 JT	07R009	94.5	42 JT	42 JT	26 UT	147 JT	50.7	30 UT	42 JT

Notes:

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table 4-12. Round 1 Summary Statistics of Chemical Concentrations in Northern Pikeminnow Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
		Conventionals (percent)														
northern pikeminnow	whole-body	Total solids	6	6	100	25.6	31.6	08R010	28.1	26.9	29.2 T	25.6	31.6	28.1	26.9	29.2 T
northern pikeminnow	whole-body	Lipids	6	6	100	2.3 T	8.1 T	03R014	5.25	4.6 T	6.3 T	2.3 T	8.1 T	5.25	4.6 T	6.3 T
		Metals (mg/kg)														
northern pikeminnow	whole-body	Aluminum	6	3	50	1.4 J	2.8 J	09R006	1.9	1.5 J	1.5 J	0.7 UJT	2.8 J	1.37	1 UJ	1.5 J
northern pikeminnow	whole-body	Antimony	6	0	0							0.001 UT	0.002 U	0.00133	0.001 U	0.002 U
northern pikeminnow	whole-body	Arsenic	6	6	100	0.19	0.36 T	03R014	0.26	0.21	0.36	0.19	0.36 T	0.26	0.21	0.36
northern pikeminnow	whole-body	Cadmium	6	6	100	0.007 J	0.012 J	05R006	0.00975	0.009 J	0.0115 JT	0.007 J	0.012 J	0.00975	0.009 J	0.0115 JT
northern pikeminnow	whole-body	Chromium	6	5	83.3	0.09 J	0.67	07R009	0.402	0.55	0.6	0.08 U	0.67	0.348	0.1 JT	0.6
northern pikeminnow	whole-body	Copper	6	6	100	0.575 T	0.89	09R006	0.661	0.6	0.72	0.575 T	0.89	0.661	0.6	0.72
northern pikeminnow	whole-body	Lead	6	4	66.7	0.008	0.016	07R009	0.0118	0.009	0.014	0.005 UT	0.016	0.00983	0.008	0.014
northern pikeminnow	whole-body	Manganese	6	6	100	1.05 J	1.97 J	08R010	1.59	1.49 J	1.88 J	1.05 J	1.97 J	1.59	1.49 J	1.88 J
northern pikeminnow	whole-body	Mercury	6	6	100	0.146 T	0.494	07R009	0.28	0.173	0.39	0.146 T	0.494	0.28	0.173	0.39
northern pikeminnow	whole-body	Nickel	6	6	100	0.119 J	0.461 J	07R009	0.259	0.2 J	0.303 J	0.119 J	0.461 J	0.259	0.2 J	0.303 J
northern pikeminnow	whole-body	Selenium	6	2	33.3	0.3	0.4	03R014	0.35	0.3	0.3	0.3 UT	0.4	0.317	0.3 U	0.3
northern pikeminnow	whole-body	Silver	6	0	0							0.0013 U	0.0052 U	0.00215	0.0014 U	0.0019 U
northern pikeminnow	whole-body	Thallium	6	5	83.3	0.0018 J	0.004 J	03R014	0.00267	0.0026 J	0.00285 JT	0.0012 U	0.004 J	0.00243	0.0021 J	0.00285 JT
northern pikeminnow	whole-body	Zinc	6	6	100	16.4	20	08R010	18	17.5 T	19.4	16.4	20	18	17.5 T	19.4
		PCB Aroclors (ug/kg)														
northern pikeminnow	whole-body	Aroclor 1016	6	0	0							7.6 U	36 U	19.5	19 U	28 U
northern pikeminnow	whole-body	Aroclor 1242	6	0	0							7.6 U	44 U	22.5	19 U	38 U
northern pikeminnow	whole-body	Aroclor 1248	6	4	66.7	150	170	09R006	158	150	160	150	170	158	150 U	170 U
northern pikeminnow	whole-body	Aroclor 1254	6	0	0							270 U	940 U	460	400 U	460 U
northern pikeminnow	whole-body	Aroclor 1260	6	6	100	220	1800	07R009	728	560	840	220	1800	728	560	840
northern pikeminnow	whole-body	Aroclor 1262	6	0	0							7.6 U	36 U	18	19 U	19 U
northern pikeminnow	whole-body	Aroclor 1268	6	0	0							7.6 U	36 U	18	19 U	19 U
northern pikeminnow	whole-body	Aroclor 1221	6	0	0							7.6 U	79 U	33.2	19 U	67 U
northern pikeminnow	whole-body	Aroclor 1232	6	0	0							7.6 U	62 U	26	19 U	41 U
northern pikeminnow	whole-body	Total PCB Aroclors	6	6	100	370 T	1800 T	07R009	833	670 T	1010 T	370 T	1800 T	833	670 T	1010 T
		Organochlorine Pesticides (ug/kg)														
northern pikeminnow	whole-body	2,4'-DDD	6	1	16.7	29 T	29 T	07R009	29	29 T	29 T	4.5 UT	29 T	11.1	8.6 UT	9.8 U
northern pikeminnow	whole-body	2,4'-DDE	6	1	16.7	53 T	53 T	07R009	53	53 T	53 T	4 UT	53 T	14.3	7.5 UT	9.8 U
northern pikeminnow	whole-body	2,4'-DDT	6	1	16.7	91 T	91 T	07R009	91	91 T	91 T	6.9 UT	91 T	23.3	6.9 UT	21 U
northern pikeminnow	whole-body	4,4'-DDD	6	5	83.3	17 NJ	48 T	05R006	38.9	43 T	46 T	6.1 UT	48 T	33.4	40.5 T	46 T
northern pikeminnow	whole-body	4,4'-DDE	6	6	100	82	545 T	07R009	252	210 T	305 T	82	545 T	252	210 T	305 T
northern pikeminnow	whole-body	4,4'-DDT	6	1	16.7	53 J	53 J	08R010	53	53 J	53 J	6.3 UT	53 J	14.1	6.3 UT	6.3 UT
northern pikeminnow	whole-body	Total of 3 isomers: pp-DDT,-DDD,-DDE	6	6	100	145 T	588 T	07R009	293	251 T	353 T	145 T	588 T	293	251 T	353 T
northern pikeminnow	whole-body	Aldrin	6	0	0							4 UT	13 UT	8.45	9.8 U	10 UT
northern pikeminnow	whole-body	alpha-Hexachlorocyclohexane	6	0	0							4 UT	9.8 U	6.17	6.4 UT	6.4 UT
northern pikeminnow	whole-body	beta-Hexachlorocyclohexane	6	0	0							4 UT	9.8 U	7.22	8.5 UT	8.5 UT
northern pikeminnow	whole-body	delta-Hexachlorocyclohexane	6	0	0							4 UT	9.8 U	6.62	7.3 UT	7.3 UT
northern pikeminnow	whole-body	gamma-Hexachlorocyclohexane	6	0	0							4 UT	9.8 U	7.77	9.6 UT	9.6 UT
northern pikeminnow	whole-body	cis-Chlordane	6	0	0							6.4 U	19 U	10.9	9.9 U	10 U
northern pikeminnow	whole-body	trans-Chlordane	6	0	0							4 UT	9.8 U	7.17	8.4 UT	8.4 UT
northern pikeminnow	whole-body	Oxychlordane	6	0	0							4 UT	19 UT	9.45	9.8 U	10 UT
northern pikeminnow	whole-body	cis-Nonachlor	6	0	0							7.1 UT	9.8 U	7.55	7.1 UT	7.1 UT
northern pikeminnow	whole-body	trans-Nonachlor	6	0	0							11 UT	14 U	11.5	11 UT	11 UT
northern pikeminnow	whole-body	Dieldrin	6	0	0							4.9 UT	14 UT	10.4	9.9 UT	14 UT
northern pikeminnow	whole-body	alpha-Endosulfan	6	0	0							4 U	19 U	9.45	9.8 U	10 U
northern pikeminnow	whole-body	beta-Endosulfan	6	0	0							4 UT	15 UT	8.78	9.8 U	10 UT
northern pikeminnow	whole-body	Endosulfan sulfate	6	0	0							4 UT	12 UT	8.28	9.8 U	10 UT

Table 4-12. Round 1 Summary Statistics of Chemical Concentrations in Northern Pikeminnow Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	**Tissue Type**	**Analyte**	**N**	**N Detected**	**% Detected**	**Minimum**	**Maximum**	**Location**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th UCL**
northern pikeminnow	whole-body	Endrin	6	0	0							4 UT	19 UT	9.45	9.8 U	10 UT
northern pikeminnow	whole-body	Endrin aldehyde	6	0	0							4 UT	9.8 U	7.22	8.5 UT	8.5 UT
northern pikeminnow	whole-body	Endrin ketone	6	0	0							4 UT	9.8 U	6.72	7.5 UT	7.5 UT
northern pikeminnow	whole-body	Heptachlor	6	0	0							4 UT	13 UT	8.45	9.8 U	10 UT
northern pikeminnow	whole-body	Heptachlor epoxide	6	0	0							4 UT	9.8 U	6.97	8 UT	8 UT
northern pikeminnow	whole-body	Methoxychlor	6	1	16.7	17 JT	17 JT	05R006	17	17 JT	17 JT	4.8 UT	17 JT	7.7	4.8 UT	10 U
northern pikeminnow	whole-body	Mirex	6	0	0							4 UT	9.8 U	6.07	6.2 UT	6.2 UT
northern pikeminnow	whole-body	Toxaphene	6	0	0							730 U	2300 U	1240	1100 U	1200 U
		Semivolatile Organic Compounds (ug/kg)														
northern pikeminnow	whole-body	Hexachlorobenzene	6	0	0							4 UT	9.8 U	6.17	6.4 UT	6.4 UT
northern pikeminnow	whole-body	Hexachlorobutadiene	6	0	0							4 UJT	9.8 UJ	5.27	4.6 UT	4.6 UT
northern pikeminnow	whole-body	Hexachloroethane	6	0	0							4 UJT	13 UT	8.77	9.8 UJ	10 UJT

Notes:

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table 4-13. Round 1 Summary Statistics of Chemical Concentrations in Peamouth Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
		Conventionals (percent)														
peamouth	whole-body	Total solids	4	4	100	28.8	30.7	05R006	29.8	29.4	30.3	28.8	30.7	29.8	29.4	30.3
peamouth	whole-body	Lipids	4	4	100	6.93 T	10.7 T	05R006	8.93	7.9 T	10.2 T	6.93 T	10.7 T	8.93	7.9 T	10.2 T
		Metals (mg/kg)														
peamouth	whole-body	Aluminum	4	4	100	15.1 J	185	03R014	109	54.5	181	15.1 J	185	109	54.5	181
peamouth	whole-body	Antimony	4	0	0							0.003 U	0.005 U	0.004	0.003 U	0.005 U
peamouth	whole-body	Arsenic	4	4	100	0.35	0.48	08R010	0.425	0.42	0.45	0.35	0.48	0.425	0.42	0.45
peamouth	whole-body	Cadmium	4	4	100	0.021	0.053	09R006	0.032	0.026	0.028	0.021	0.053	0.032	0.026	0.028
peamouth	whole-body	Chromium	4	3	75	0.2	0.49	03R014	0.3	0.21	0.21	0.09 U	0.49	0.248	0.2	0.21
peamouth	whole-body	Copper	4	4	100	0.73	1.61	03R014	1.21	1.05	1.45	0.73	1.61	1.21	1.05	1.45
peamouth	whole-body	Lead	4	4	100	0.031	10.6	03R014	2.7	0.047	0.111	0.031	10.6	2.7	0.047	0.111
peamouth	whole-body	Manganese	4	4	100	2.91 J	11.1 J	05R006	6.68	3.99 J	8.7 J	2.91 J	11.1 J	6.68	3.99 J	8.7 J
peamouth	whole-body	Mercury	4	4	100	0.031	0.054	09R006	0.0383	0.033	0.035	0.031	0.054	0.0383	0.033	0.035
peamouth	whole-body	Nickel	4	4	100	0.27 J	0.482 J	03R014	0.386	0.345 J	0.448 J	0.27 J	0.482 J	0.386	0.345 J	0.448 J
peamouth	whole-body	Selenium	4	4	100	0.3	0.4	05R006	0.35	0.3	0.4	0.3	0.4	0.35	0.3	0.4
peamouth	whole-body	Silver	4	0	0							0.001 U	0.0043 U	0.00333	0.0039 U	0.0041 U
peamouth	whole-body	Thallium	4	4	100	0.0073	0.0093	05R006	0.00828	0.0073	0.0092	0.0073	0.0093	0.00828	0.0073	0.0092
peamouth	whole-body	Zinc	4	4	100	23.1	25.2	08R010	24.1	23.5	24.7	23.1	25.2	24.1	23.5	24.7
		PCB Aroclors (ug/kg)														
peamouth	whole-body	Aroclor 1016	4	0	0							1.9 U	9.5 U	5.7	1.9 U	9.5 U
peamouth	whole-body	Aroclor 1242	4	0	0							1.9 U	9.5 U	5.7	1.9 U	9.5 U
peamouth	whole-body	Aroclor 1248	4	4	100	64	150	09R006	90.5	69	79	64	150	90.5	69	79
peamouth	whole-body	Aroclor 1254	4	0	0							110 U	180 U	133	120 U	120 U
peamouth	whole-body	Aroclor 1260	4	4	100	68	140	09R006	96.8	69	110	68	140	96.8	69	110
peamouth	whole-body	Aroclor 1262	4	0	0							1.9 U	9.5 U	5.7	1.9 U	9.5 U
peamouth	whole-body	Aroclor 1268	4	0	0							1.9 U	9.5 U	5.7	1.9 U	9.5 U
peamouth	whole-body	Aroclor 1221	4	0	0							1.9 U	9.5 U	5.7	1.9 U	9.5 U
peamouth	whole-body	Aroclor 1232	4	0	0							1.9 U	9.5 U	5.7	1.9 U	9.5 U
peamouth	whole-body	Total PCB Aroclors	4	4	100	138 T	290 T	09R006	187	147 T	174 T	138 T	290 T	187	147 T	174 T
		Organochlorine Pesticides (ug/kg)														
peamouth	whole-body	2,4'-DDD	4	0	0							4 UT	8.6 UT	5.65	4.2 UT	5.8 UT
peamouth	whole-body	2,4'-DDE	4	0	0							1 UT	2.1 UT	1.45	1 UT	1.7 UT
peamouth	whole-body	2,4'-DDT	4	1	25	5.7 JT	5.7 JT	03R014	5.7	5.7 JT	5.7 JT	5.7 JT	6.9 UT	6.6	6.9 UT	6.9 UJT
peamouth	whole-body	4,4'-DDD	4	4	100	11.1 T	29.5 T	09R006	22.5	24.5 T	25 JT	11.1 T	29.5 T	22.5	24.5 T	25 JT
peamouth	whole-body	4,4'-DDE	4	4	100	109 T	185 T	09R006	132	110 T	125 JT	109 T	185 T	132	110 T	125 JT
peamouth	whole-body	4,4'-DDT	4	2	50	6.4 JT	7 T	05R006	6.7	6.4 JT	6.4 JT	6.3 UJT	7 T	6.5	6.3 UJT	6.4 JT
peamouth	whole-body	Total of 3 isomers: pp-DDT,-DDD,-DDE	4	4	100	127 JT	215 T	09R006	159	142 T	150 JT	127 JT	215 T	159	142 T	150 JT
peamouth	whole-body	Aldrin	4	0	0							1 UT	1.7 UT	1.23	1 UT	1.2 UT
peamouth	whole-body	alpha-Hexachlorocyclohexane	4	0	0							1 UT	1 UT	1	1 UT	1 UT
peamouth	whole-body	beta-Hexachlorocyclohexane	4	0	0							2.4 UT	4.1 UT	3.2	2.7 UT	3.6 UT
peamouth	whole-body	delta-Hexachlorocyclohexane	4	0	0							1.3 UT	2.2 UT	1.8	1.6 UT	2.1 UT
peamouth	whole-body	gamma-Hexachlorocyclohexane	4	0	0							1 UT	3.3 UT	2.1	1.9 UT	2.2 UT
peamouth	whole-body	cis-Chlordane	4	2	50	3.1 N	3.4 N	05R006	3.25	3.1 N	3.1 N	1.7 U	3.4 N	2.65	2.4 U	3.1 N
peamouth	whole-body	trans-Chlordane	4	0	0							1 UT	5.6 UT	2.6	1 UT	2.8 UT
peamouth	whole-body	Oxychlordane	4	0	0							1 UT	1 UT	1	1 UT	1 UT
peamouth	whole-body	cis-Nonachlor	4	0	0							5.2 UT	7.1 UT	6.28	5.7 UT	7.1 UT
peamouth	whole-body	trans-Nonachlor	4	0	0							3.6 UT	11 UT	9.15	11 UT	11 UT
peamouth	whole-body	Dieldrin	4	0	0							1.4 UT	3.3 UT	2.2	1.9 UT	2.2 UT
peamouth	whole-body	alpha-Endosulfan	4	0	0							1 U	1 U	1	1 U	1 U
peamouth	whole-body	beta-Endosulfan	4	0	0							1 UT	1.2 UT	1.05	1 UT	1 UT

Table 4-13. Round 1 Summary Statistics of Chemical Concentrations in Peamouth Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
peamouth	whole-body	Endosulfan sulfate	4	0	0							1 UT	1 UT	1	1 UT	1 UT
peamouth	whole-body	Endrin	4	0	0							1 UT	1 UT	1	1 UT	1 UT
peamouth	whole-body	Endrin aldehyde	4	0	0							1 UT	1.6 UT	1.18	1 UT	1.1 UT
peamouth	whole-body	Endrin ketone	4	0	0							1 UT	1 UT	1	1 UJT	1 UT
peamouth	whole-body	Heptachlor	4	0	0							1 UT	2.3 UT	1.68	1.4 UT	2 UT
peamouth	whole-body	Heptachlor epoxide	4	0	0							1 UT	1 UT	1	1 UT	1 UT
peamouth	whole-body	Methoxychlor	4	0	0							1 UT	4.8 UT	2.08	1.1 UT	1.4 UT
peamouth	whole-body	Mirex	4	0	0							1 UT	1.2 UT	1.05	1 UT	1 UT
peamouth	whole-body	Toxaphene	4	0	0							98 U	190 U	142	130 U	150 U
		Semivolatile Organic Compounds (ug/kg)														
peamouth	whole-body	Hexachlorobenzene	4	3	75	5.7 NT	7.3 NT	03R014	6.23	5.7 NT	5.7 NT	3.8 UT	7.3 NT	5.63	5.7 NT	5.7 NT
peamouth	whole-body	Hexachlorobutadiene	4	0	0							1 UJT	1 UJT	1	1 UJT	1 UJT
peamouth	whole-body	Hexachloroethane	4	2	50	2.6 NJT	3.7 NJT	03R014	3.15	2.6 NJT	2.6 NJT	1 UJT	3.7 NJT	2.08	1 UJT	2.6 NJT

Notes:

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table 4-14. Round 1 Summary Statistics of Chemical Concentrations in Sculpin Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
		Conventionals (percent)														
sculpin	whole-body	Total solids	26	26	100	21.3	27.2	06R004	25.2	25.1	26.5	21.3	27.2	25.2	25.1	26.5
sculpin	whole-body	Lipids	26	26	100	2.2 T	6	03R001	4.17	4.1	5.5	2.2 T	6	4.17	4.1	5.5
		Metals (mg/kg)														
sculpin	whole-body	Aluminum	26	23	88.5	10.1 J	33.8 J	06R001	21.5	21.7	33.4	10.1 J	46.5 U	22.6	21.7	33.4
sculpin	whole-body	Antimony	26	0	0							0.001 U	0.009 U	0.00188	0.001 U	0.003 U
sculpin	whole-body	Arsenic	26	26	100	0.13	0.3	03R032	0.205	0.21	0.27	0.13	0.3	0.205	0.21	0.27
sculpin	whole-body	Cadmium	26	26	100	0.003 J	0.022	02R015	0.00931	0.007 J	0.019	0.003 J	0.022	0.00931	0.007 J	0.019
sculpin	whole-body	Chromium	26	10	38.5	0.1 J	0.35	09R002	0.193	0.14	0.34	0.07 U	0.35	0.122	0.08 U	0.24
sculpin	whole-body	Copper	26	26	100	0.929	1.68	06R001	1.25	1.25	1.5	0.929	1.68	1.25	1.25	1.5
sculpin	whole-body	Lead	26	25	96.2	0.0149 J	0.96 J	04R002	0.135	0.065	0.255 J	0.0149 J	0.96 J	0.144	0.065	0.365 U
sculpin	whole-body	Manganese	26	26	100	1.96	5.79	02R015	2.9	2.6	3.88	1.96	5.79	2.9	2.6	3.88
sculpin	whole-body	Mercury	27	27	100	0.025	0.086	07R003	0.0416	0.039	0.069	0.025	0.086	0.0416	0.039	0.069
sculpin	whole-body	Nickel	26	20	76.9	0.16	0.398 J	07R003	0.29	0.311 J	0.386 J	0.08 U	0.398 J	0.247	0.23	0.374 J
sculpin	whole-body	Selenium	26	4	15.4	0.2	0.3	03R004	0.275	0.3	0.3	0.2 U	0.3 U	0.269	0.3	0.3 U
sculpin	whole-body	Silver	26	1	3.85	0.0067	0.0067	08R002	0.0067	0.0067	0.0067	0.0007 U	0.0067	0.002	0.0016 U	0.003 U
sculpin	whole-body	Thallium	26	25	96.2	0.002 J	0.012	02R015	0.00443	0.004 J	0.007	0.0018 U	0.012	0.00433	0.0039 J	0.007
sculpin	whole-body	Zinc	26	26	100	13.6	18	09R001	15.4	15.4	17.5	13.6	18	15.4	15.4	17.5
		PCB Aroclors (ug/kg)														
sculpin	whole-body	Aroclor 1016	26	0	0							1.9 U	85 U	19.4	9.5 U	39 U
sculpin	whole-body	Aroclor 1242	26	0	0							1.9 UJ	92 UJ	20.8	9.5 U	50 U
sculpin	whole-body	Aroclor 1248	26	19	73.1	27 T	2600	02R015	335	86 J	1900 J	27 T	2600	282	100 J	290
sculpin	whole-body	Aroclor 1254	26	0	0							50 UJ	2100 U	275	98 UJ	400 U
sculpin	whole-body	Aroclor 1260	26	26	100	62 J	2300	06R002	317	120 J	670	62 J	2300	317	120 J	670
sculpin	whole-body	Aroclor 1262	26	0	0							1.9 UJ	38 UJ	15.7	9.5 U	38 UJ
sculpin	whole-body	Aroclor 1268	26	0	0							1.9 UJ	38 UJ	15.7	9.5 U	38 UJ
sculpin	whole-body	Aroclor 1221	26	0	0							1.9 U	180 U	32.5	9.5 U	120 U
sculpin	whole-body	Aroclor 1232	26	0	0							1.9 U	94 U	23.1	9.5 U	79 U
sculpin	whole-body	Total PCB Aroclors	26	26	100	62 JT	3360 T	02R015	562	226 JT	2300 T	62 JT	3360 T	562	226 JT	2300 T
		Organochlorine Pesticides (ug/kg)														
sculpin	whole-body	2,4'-DDD	26	4	15.4	2.1 NJ	71 T	07R006	31	18 JT	33 JT	1 UT	71 T	8.12	2.9 U	18 JT
sculpin	whole-body	2,4'-DDE	26	3	11.5	7.9 JT	27 T	07R006	16.3	14 JT	14 JT	1 U	27 T	4.74	1.8 U	9.6 U
sculpin	whole-body	2,4'-DDT	26	17	65.4	5.4 NJ	325 T	07R006	38.9	9.8 NJ	81 NJ	4.3 U	325 T	27.7	8.4 NJ	62.5 T
sculpin	whole-body	4,4'-DDD	26	19	73.1	4.6 NJ	305 T	07R006	35.1	8.3 N	140 JT	4 UT	305 T	27.3	7.2 N	84 T
sculpin	whole-body	4,4'-DDE	26	19	73.1	14 NJ	630 T	07R006	73.2	25 NJ	230 JT	11 U	630 T	59.2	24 JT	160 T
sculpin	whole-body	4,4'-DDT	26	21	80.8	8.9 JT	1700 T	07R006	125	26 J	135 JT	6.3 UT	1700 T	103	21 J	135 JT
sculpin	whole-body	Total of 3 isomers: pp-DDT,-DDD,-DDE	26	26	100	16 JT	2640 T	07R006	181	44 JT	494 T	16 JT	2640 T	181	44 JT	494 T
sculpin	whole-body	Aldrin	26	0	0							1 U	13 UT	3.18	1.6 U	9.6 U
sculpin	whole-body	alpha-Hexachlorocyclohexane	26	0	0							1 U	9.6 U	2.49	1 U	4 UT
sculpin	whole-body	beta-Hexachlorocyclohexane	26	12	46.2	2 NJ	6.2 NJ	03R002	3.92	3.9 NJ	5.3 NJ	1 UJ	9.6 U	5.36	4.3 NJ	8.5 UT
sculpin	whole-body	delta-Hexachlorocyclohexane	26	2	7.69	1 NJ	1.6 NJ	06R001	1.3	1 NJ	1 NJ	1 UJ	9.6 U	2.52	1 UT	4 UT
sculpin	whole-body	gamma-Hexachlorocyclohexane	26	11	42.3	1.1 NJ	3.1 NJ	03R004	1.92	1.7 N	2.7 NJ	1 U	9.6 U	3.52	2.6 NJ	9.6 UT
sculpin	whole-body	cis-Chlordane	26	14	53.8	2.5 NJ	16 NJ	07R006	4.68	3.9 NJ	5 NJ	2.5 NJ	20 U	5.16	4 U	9.6 U
sculpin	whole-body	trans-Chlordane	26	1	3.85	4.4 NJ	4.4 NJ	03R002	4.4	4.4 NJ	4.4 NJ	1 U	9.6 U	3.33	2.9 UT	8.4 UT
sculpin	whole-body	Oxychlordane	26	0	0							1 U	20 UT	3.05	1 UT	4.6 UT

Table 4-14. Round 1 Summary Statistics of Chemical Concentrations in Sculpin Tissue.

Species	Tissue Type	Analyte	N	N Detected	% Detected	Detected Concentrations Minimum	Maximum	Location	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th UCL
sculpin	whole-body	cis-Nonachlor	26	0	0							3.3 UJ	11 U	5.9	5.1 U	8.4 U
sculpin	whole-body	trans-Nonachlor	26	10	38.5	4.8 N	6.5 NJ	03R002	5.43	5.2 NJ	6.1 NJ	3.1 U	11 UT	6.44	5.2 NJ	11 UT
sculpin	whole-body	Dieldrin	26	14	53.8	2.6 NJ	24 JT	02R001	8.06	4 NJ	19 NJ	2.6 NJ	24 JT	8.53	4.6 N	15 NJ
sculpin	whole-body	alpha-Endosulfan	26	0	0							1 U	20 U	3.41	1.1 U	7.2 U
sculpin	whole-body	beta-Endosulfan	26	0	0							1 U	15 UT	3.02	1.3 UT	4 UT
sculpin	whole-body	Endosulfan sulfate	26	2	7.69	1.2 NJ	1.3 NJ	03R001	1.25	1.2 NJ	1.2 NJ	1 U	12 UT	3.45	1.2 NJ	12 UT
sculpin	whole-body	Endrin	26	0	0							1 U	31 UT	6.39	2.2 U	31 UT
sculpin	whole-body	Endrin aldehyde	26	0	0							1 UJ	9.6 U	3.48	2.9 UJT	8.5 UT
sculpin	whole-body	Endrin ketone	26	0	0							1 UJ	9.6 U	2.51	1 UJ	4 UT
sculpin	whole-body	Heptachlor	26	0	0							1 U	13 UT	2.73	1 UT	4 UT
sculpin	whole-body	Heptachlor epoxide	26	3	11.5	2	3.2 NJ	03R001	2.4	2 NJ	2 NJ	1 U	9.6 U	3.13	2	8 UT
sculpin	whole-body	Methoxychlor	26	11	42.3	1.2 NJ	7.6 N	04R003	2.52	1.8 NJ	3.2 NJ	1 U	9.6 U	3.55	4 UT	4.8 UT
sculpin	whole-body	Mirex	26	0	0							1 U	9.6 U	2.65	1 U	6.2 UT
sculpin	whole-body	Toxaphene	26	0	0							79 U	4500 U	464	170 U	950 UJ
		Semivolatile Organic Compounds (ug/kg)														
sculpin	whole-body	1,2,4-Trichlorobenzene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	1,2-Dichlorobenzene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	1,2-Diphenylhydrazine	26	0	0							27 U	33 U	30.5	31 U	33 U
sculpin	whole-body	1,3-Dichlorobenzene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	1,4-Dichlorobenzene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Azobenzene	26	0	0							140 U	170 U	155	160 U	170 U
sculpin	whole-body	Bis(2-chloro-1-methylethyl) ether	26	0	0							140 U	170 U	155	160 U	170 U
sculpin	whole-body	2,4-Dinitrotoluene	26	0	0							27 UJT	68 UT	47.3	54 UJT	65 UJT
sculpin	whole-body	2,6-Dinitrotoluene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	2-Chloronaphthalene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	2-Nitroaniline	26	0	0							680 U	830 U	770	780 U	830 U
sculpin	whole-body	3,3'-Dichlorobenzidine	26	0	0							1400 U	1700 U	1550	1600 U	1700 U
sculpin	whole-body	3-Nitroaniline	26	0	0							680 U	830 U	770	780 U	830 U
sculpin	whole-body	4-Bromophenyl phenyl ether	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	4-Chloroaniline	26	0	0							140 UT	170 UT	152	150 UT	160 UT
sculpin	whole-body	4-Chlorophenyl phenyl ether	26	0	0							68 UT	83 UT	76.1	77 UT	82 UT
sculpin	whole-body	4-Nitroaniline	26	0	0							680 U	830 U	770	780 U	830 U
sculpin	whole-body	Benzyl alcohol	26	0	0							270 U	330 U	308	310 U	330 U
sculpin	whole-body	Bis(2-chloroethoxy) methane	26	0	0							140 U	170 U	155	160 U	170 U
sculpin	whole-body	Bis(2-chloroethyl) ether	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Carbazole	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Dibenzofuran	26	1	3.85	33 T	33 T	06R004	33	33 T	33 T	27 UT	33 T	30.6	31 UT	33 UT
sculpin	whole-body	Hexachlorobenzene	26	0	0							4 UT	33 UT	17.8	9.6 UT	32 UT
sculpin	whole-body	Hexachlorobutadiene	26	1	3.85	2 JT	2 JT	06R001	2	2 JT	2 JT	1 UJT	33 UT	4.95	2 JT	9.6 UJT
sculpin	whole-body	Hexachlorocyclopentadiene	26	0	0							680 U	830 U	770	780 U	830 U
sculpin	whole-body	Hexachloroethane	26	0	0							1 UJT	33 UT	6.14	1 UJT	28 UT
sculpin	whole-body	Nitrobenzene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	N-Nitrosodimethylamine	26	0	0							140 UT	770 U	176	150 UJT	170 UT
sculpin	whole-body	N-Nitrosodipropylamine	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	N-Nitrosodiphenylamine	26	0	0							140 U	170 UJ	155	160 U	170 UJ

Table 4-14. Round 1 Summary Statistics of Chemical Concentrations in Sculpin Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	**Tissue Type**	**Analyte**	**N**	**Detected**	**Detected**	**Minimum**	**Maximum**	**Location**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th UCL**
		Phenols (ug/kg)														
sculpin	whole-body	2,4,5-Trichlorophenol	26	0	0							680 U	830 U	770	780 U	830 U
sculpin	whole-body	2,4,6-Trichlorophenol	26	0	0							27 UT	52 UT	31.2	31 UT	33 UT
sculpin	whole-body	2,4-Dichlorophenol	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	2,4-Dimethylphenol	26	0	0							410 U	500 U	462	470 U	500 U
sculpin	whole-body	2,4-Dinitrophenol	24	0	0							2700 U	3300 U	3060	3100 U	3300 U
sculpin	whole-body	2-Chlorophenol	26	0	0							27 UT	33 UT	30.6	31 UT	33 UT
sculpin	whole-body	2-Methylphenol	26	0	0							140 U	170 U	155	160 U	170 U
sculpin	whole-body	4,6-Dinitro-2-methylphenol	26	0	0							2700 U	3300 U	3080	3100 U	3300 U
sculpin	whole-body	4-Chloro-3-methylphenol	26	0	0							270 U	330 U	308	310 U	330 U
sculpin	whole-body	4-Methylphenol	26	1	3.85	62 T	62 T	02R015	62	62 T	62 T	27 UT	62 T	31.6	31 UT	33 UT
sculpin	whole-body	4-Nitrophenol	26	0	0							1400 U	1700 U	1550	1600 U	1700 U
sculpin	whole-body	Pentachlorophenol	26	0	0							140 UT	170 UT	152	150 UT	160 UT
sculpin	whole-body	Phenol	26	0	0							270 U	330 U	308	310 U	330 U
sculpin	whole-body	2,3,4,5-Tetrachlorophenol	26	0	0							1400 U	1700 UJ	1550	1600 U	1700 UJ
sculpin	whole-body	2,3,5,6-Tetrachlorophenol	26	0	0							1400 U	1700 U	1550	1600 U	1700 U
		Phthalates (ug/kg)														
sculpin	whole-body	Dimethyl phthalate	26	0	0							140 U	170 U	155	160 U	170 U
sculpin	whole-body	Diethyl phthalate	26	0	0							140 U	170 U	155	160 U	170 U
sculpin	whole-body	Dibutyl phthalate	26	0	0							270 U	330 U	308	310 U	330 U
sculpin	whole-body	Butylbenzyl phthalate	26	0	0							270 U	330 UJ	308	310 U	330 U
sculpin	whole-body	Di-n-octyl phthalate	26	1	3.85	600 J	600 J	02R001	600	600 J	600 J	270 UJ	600 J	319	310 UJ	330 UJ
sculpin	whole-body	Bis(2-ethylhexyl) phthalate	26	3	11.5	99 T	28000 JT	08R003	12500	9400 JT	9400 JT	82 UT	28000 JT	1620	160 UT	810 UT
		PAHs (ug/kg)														
sculpin	whole-body	2-Methylnaphthalene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Acenaphthene	26	10	38.5	29 T	57 T	06R004	39	37 T	45 JT	27 UT	100 UT	37.5	32 JT	47 UT
sculpin	whole-body	Acenaphthylene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Anthracene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Fluorene	26	1	3.85	33 T	33 T	06R004	33	33 T	33 T	27 UT	33 T	30.7	31 UT	33 UT
sculpin	whole-body	Naphthalene	26	1	3.85	42 T	42 T	06R004	42	42 T	42 T	27 UT	42 T	30.9	31 UT	33 UT
sculpin	whole-body	Phenanthrene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Low Molecular Weight PAH	26	10	38.5	29 T	132 T	06R004	46.5	37 T	45 JT	27 UT	132 T	40.3	32 JT	47 UT
sculpin	whole-body	Dibenz(a,h)anthracene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Benz(a)anthracene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Benzo(a)pyrene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Benzo(b)fluoranthene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Benzo(g,h,i)perylene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Benzo(k)fluoranthene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Chrysene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Fluoranthene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Indeno(1,2,3-cd)pyrene	26	0	0							27 UT	33 UT	30.5	31 UT	33 UT
sculpin	whole-body	Pyrene	26	0	0							27 UT	33 UT	30.6	31 UT	33 UT
sculpin	whole-body	High Molecular Weight PAH	26	0	0							27 UT	33 UT	30.6	31 UT	33 UT
sculpin	whole-body	Polycyclic Aromatic Hydrocarbons	26	10	38.5	29 T	132 T	06R004	46.5	37 T	45 JT	27 UT	132 T	40.3	32 JT	47 UT
		PCB Congeners (pg/g)														

Table 4-14. Round 1 Summary Statistics of Chemical Concentrations in Sculpin Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
sculpin	whole-body	PCB001	7	7	100	4.35	209 T	03R004	41.3	10.5	37.8	4.35	209 T	41.3	10.5	37.8
sculpin	whole-body	PCB002	7	1	14.3	9.48 T	9.48 T	03R004	9.48	9.48 T	9.48 T	1.85 U	9.48 T	3.38	1.87 U	3.4 U
sculpin	whole-body	PCB003	7	1	14.3	28.1 T	28.1 T	03R004	28.1	28.1 T	28.1 T	2.66 U	28.1 T	6.93	2.68 U	4.87 U
sculpin	whole-body	PCB004	9	9	100	158	3290 T	03R004	1280	749 J	2530	158	3290 T	1280	749 J	2530
sculpin	whole-body	PCB005	9	5	55.6	1.46 J	89.1 T	03R004	23.6	6.71	17.7	1.46 J	89.1 T	14.4	3.2	17.7
sculpin	whole-body	PCB006	9	9	100	20	1140 T	03R004	230	52.4	309	20	1140 T	230	52.4	309
sculpin	whole-body	PCB007	9	7	77.8	4.77 J	173 T	03R004	34	7.26 J	23.7	3.85 U	173 T	27.6	6.99 U	23.7
sculpin	whole-body	PCB008	9	9	100	49.8	4870 T	03R004	849	178	1070	49.8	4870 T	849	178	1070
sculpin	whole-body	PCB009	9	9	100	4.43 J	361 T	03R004	65	14.2	99.6	4.43 J	361 T	65	14.2	99.6
sculpin	whole-body	PCB010	9	9	100	9.33	261	06R002	72.8	34.6	166 T	9.33	261	72.8	34.6	166 T
sculpin	whole-body	PCB011	9	5	55.6	33.7	173 J	06R002	92	66 T	148	23.4 U	173 J	65.7	42.3 U	148
sculpin	whole-body	PCB012 & 013	9	5	55.6	5.16 J	48 JT	03R004	16.7	10.5 J	13.1 J	5.16 J	48 JT	12.1	6.54 J	13.1 J
sculpin	whole-body	PCB014	9	0	0							0.629 U	5.78 U	3.45	3.17 U	5.74 U
sculpin	whole-body	PCB015	9	9	100	9.07	787 T	03R004	113	27.6	80.9	9.07	787 T	113	27.6	80.9
sculpin	whole-body	PCB016	9	9	100	95.4	5550 T	03R004	1060	502	1470	95.4	5550 T	1060	502	1470
sculpin	whole-body	PCB017	9	9	100	641	8680 T	03R004	2330	1290	3210	641	8680 T	2330	1290	3210
sculpin	whole-body	PCB018 & 030	9	9	100	467 J	17500 JT	03R004	3750	1850 J	5440 J	467 J	17500 JT	3750	1850 J	5440 J
sculpin	whole-body	PCB019	9	9	100	234	5150	06R002	1430	494	2260	234	5150	1430	494	2260
sculpin	whole-body	PCB020 & 028	9	9	100	1390 J	51500 JT	03R004	12900	4220 J	32400 J	1390 J	51500 JT	12900	4220 J	32400 J
sculpin	whole-body	PCB021 & 033	9	9	100	247 J	12400 JT	03R004	2280	493 J	4010 J	247 J	12400 JT	2280	493 J	4010 J
sculpin	whole-body	PCB022	9	9	100	135	8770 T	03R004	1580	360	2190	135	8770 T	1580	360	2190
sculpin	whole-body	PCB023	9	4	44.4	1.31	36.2 T	03R004	14.5	3.94	16.5	1.31	36.2 T	8.98	3.94	16.5
sculpin	whole-body	PCB024	9	9	100	5.34	290 T	03R004	56.5	20.6	91.5	5.34	290 T	56.5	20.6	91.5
sculpin	whole-body	PCB025	9	9	100	40.2	1560 T	03R004	300	122	349	40.2	1560 T	300	122	349
sculpin	whole-body	PCB026 & 029	9	9	100	183 J	6340 JT	03R004	1300	314 J	2040 J	183 J	6340 JT	1300	314 J	2040 J
sculpin	whole-body	PCB027	9	9	100	126	1420 T	03R004	477	339	637	126	1420 T	477	339	637
sculpin	whole-body	PCB031	9	9	100	266	24700 T	03R004	4330	872	5490	266	24700 T	4330	872	5490
sculpin	whole-body	PCB032	9	9	100	406	5860 T	03R004	1870	879	4190	406	5860 T	1870	879	4190
sculpin	whole-body	PCB034	9	9	100	6.65	108 T	03R004	31.5	16.1	56.1	6.65	108 T	31.5	16.1	56.1
sculpin	whole-body	PCB035	9	1	11.1	0.487	0.487	06R002	0.487	0.487	0.487	0.487	4.32 U	2.61	2.37 U	4.28 U
sculpin	whole-body	PCB036	9	2	22.2	0.825 J	198	09R002	99.4	0.825 J	0.825 J	0.825 J	198	26.2	4 U	7.24 U
sculpin	whole-body	PCB037	9	9	100	18.1	2240 T	03R004	411	122	816	18.1	2240 T	411	122	816
sculpin	whole-body	PCB038	9	8	88.9	1.99 J	93.5	02R001	21.3	9.18 J	31.3	1.99 J	93.5	19.3	9.18 J	31.3
sculpin	whole-body	PCB039	9	9	100	4.62	294	02R001	82.2	15.2	211 T	4.62	294	82.2	15.2	211 T
sculpin	whole-body	PCB040 & 041 & 071	9	9	100	755 J	35200 J	02R001	8500	1720 J	14900 JT	755 J	35200 J	8500	1720 J	14900 JT
sculpin	whole-body	PCB042	9	9	100	262	15300	02R001	3970	796	8110 T	262	15300	3970	796	8110 T
sculpin	whole-body	PCB043	9	9	100	57.8	4620	02R001	1030	224	2010 T	57.8	4620	1030	224	2010 T
sculpin	whole-body	PCB044 & 047 & 065	9	9	100	4310 J	115000 J	02R001	31600	18700 J	39800 J	4310 J	115000 J	31600	18700 J	39800 J
sculpin	whole-body	PCB045 & 051	9	9	100	435 J	5260 J	02R001	2140	1480 J	3700 JT	435 J	5260 J	2140	1480 J	3700 JT
sculpin	whole-body	PCB046	9	9	100	29 J	742 T	03R004	221	83	448	29 J	742 T	221	83	448
sculpin	whole-body	PCB048	9	9	100	181	11100	02R001	3250	637	8660 T	181	11100	3250	637	8660 T
sculpin	whole-body	PCB049 & 069	9	9	100	3060 J	99300 J	02R001	22300	8760 J	30300 J	3060 J	99300 J	22300	8760 J	30300 J
sculpin	whole-body	PCB050 & 053	9	9	100	247 J	1810 JT	03R004	894	753 J	1570 J	247 J	1810 JT	894	753 J	1570 J
sculpin	whole-body	PCB052	9	9	100	3060	153000	02R001	34200	12900	47500	3060	153000	34200	12900	47500
sculpin	whole-body	PCB054	9	9	100	65.6	1450	06R002	337	126	621	65.6	1450	337	126	621

Table 4-14. Round 1 Summary Statistics of Chemical Concentrations in Sculpin Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
sculpin	whole-body	PCB055	9	0	0							0.966 U	8.88 U	5.32	4.87 U	8.81 U
sculpin	whole-body	PCB056	9	9	100	166	5580	02R001	1500	575	4590 T	166	5580	1500	575	4590 T
sculpin	whole-body	PCB057	9	9	100	8.44	251	02R001	81.8	47.8	228 T	8.44	251	81.8	47.8	228 T
sculpin	whole-body	PCB058	9	8	88.9	5.82	108	02R001	31.5	9.7 J	66.9 T	5.82	108	28.7	9.7 J	66.9 T
sculpin	whole-body	PCB059 & 062 & 075	9	9	100	278 J	8600 J	02R001	2140	1260 J	3720 JT	278 J	8600 J	2140	1260 J	3720 JT
sculpin	whole-body	PCB060	9	9	100	464	40000	02R001	8000	1250	15200	464	40000	8000	1250	15200
sculpin	whole-body	PCB061 & 070 & 074 & 076	9	9	100	2560 J	126000 J	02R001	28100	8080 J	50000 JT	2560 J	126000 J	28100	8080 J	50000 JT
sculpin	whole-body	PCB063	9	9	100	130	6450	02R001	1400	289	2110	130	6450	1400	289	2110
sculpin	whole-body	PCB064	9	9	100	607	60900	02R001	12500	2350	20400	607	60900	12500	2350	20400
sculpin	whole-body	PCB066	9	9	100	2190	189000	02R001	36500	7030	59500	2190	189000	36500	7030	59500
sculpin	whole-body	PCB067	9	9	100	54.5	730 T	03R004	237	93.1	505	54.5	730 T	237	93.1	505
sculpin	whole-body	PCB068	9	9	100	6.84	139	06R002	67.2	79.1	91.6 T	6.84	139	67.2	79.1	91.6 T
sculpin	whole-body	PCB072	9	9	100	57.6	799	02R001	217	144	309 T	57.6	799	217	144	309 T
sculpin	whole-body	PCB073	9	6	66.7	22.5	645	06R002	182	80.4	181	11.1 UT	645	125	67.1	181
sculpin	whole-body	PCB077	9	9	100	81.7	1700	02R001	458	171	1390 T	81.7	1700	458	171	1390 T
sculpin	whole-body	PCB078	9	0	0							0.953 U	7.6 U	4.59	4.17 U	7.54 U
sculpin	whole-body	PCB079	9	9	100	22.1	490	02R001	139	122	172	22.1	490	139	122	172
sculpin	whole-body	PCB080	9	0	0							1.22 U	11.2 U	6.67	6.13 U	11.1 U
sculpin	whole-body	PCB081	9	9	100	2.49	58	02R001	17.1	6.82	50.8 T	2.49	58	17.1	6.82	50.8 T
sculpin	whole-body	PCB082	9	9	100	73.9	1830	02R001	609	596	1030	73.9	1830	609	596	1030
sculpin	whole-body	PCB083 & 099	9	9	100	7200 J	114000 J	02R001	31700	26800 J	33500 J	7200 J	114000 J	31700	26800 J	33500 J
sculpin	whole-body	PCB084	9	9	100	242	3830	02R001	1220	1020	1860	242	3830	1220	1020	1860
sculpin	whole-body	PCB085 & 116 & 117	9	9	100	1330 J	47200 J	02R001	10300	6060 J	14000 J	1330 J	47200 J	10300	6060 J	14000 J
sculpin	whole-body	PCB086 & 087 & 097 & 108 & 119 & 125	9	9	100	2580 J	51300 J	02R001	14100	12500 J	18500 J	2580 J	51300 J	14100	12500 J	18500 J
sculpin	whole-body	PCB088 & 091	9	9	100	470 J	7290 J	02R001	2290	2110 JT	2720 J	470 J	7290 J	2290	2110 JT	2720 J
sculpin	whole-body	PCB089	9	9	100	13.3	833	02R001	176	59.6	336	13.3	833	176	59.6	336
sculpin	whole-body	PCB090 & 101 & 113	9	9	100	6700 J	94900 J	02R001	32300	29900 J	45600 J	6700 J	94900 J	32300	29900 J	45600 J
sculpin	whole-body	PCB092	9	9	100	1590	22300	02R001	7480	6220	11300	1590	22300	7480	6220	11300
sculpin	whole-body	PCB093 & 095 & 098 & 100 & 102	9	9	100	2510 J	36300 J	02R001	13300	10900 J	21500 J	2510 J	36300 J	13300	10900 J	21500 J
sculpin	whole-body	PCB094	9	9	100	10.8	105	06R002	40.6	33.3	64.7	10.8	105	40.6	33.3	64.7
sculpin	whole-body	PCB096	9	9	100	48.1	912	02R001	254	162	376	48.1	912	254	162	376
sculpin	whole-body	PCB103	9	9	100	94.7	1760	06R002	455	330	489	94.7	1760	455	330	489
sculpin	whole-body	PCB104	9	5	55.6	10.6	226	06R002	65.9	25.5	50.9	7.43 U	226	41.9	13.6 U	50.9
sculpin	whole-body	PCB105	9	9	100	1920	57700	02R001	14700	11600	21800	1920	57700	14700	11600	21800
sculpin	whole-body	PCB106	9	1	11.1	16.6 J	16.6 J	06R002	16.6	16.6 J	16.6 J	1.95 U	17.9 U	11.4	9.87 U	17.8 U
sculpin	whole-body	PCB107 & 124	9	9	100	129 J	2010 J	02R001	579	283 J	875 JT	129 J	2010 J	579	283 J	875 JT
sculpin	whole-body	PCB109	9	9	100	537	9880	02R001	2710	1990	3250	537	9880	2710	1990	3250
sculpin	whole-body	PCB110 & 115	9	9	100	3950 J	80500 J	02R001	23300	20500 JT	29600 J	3950 J	80500 J	23300	20500 JT	29600 J
sculpin	whole-body	PCB111	9	9	100	11 JT	129	06R002	41.4	25.3	56.8	11 JT	129	41.4	25.3	56.8
sculpin	whole-body	PCB112	9	1	11.1	1790	1790	06R002	1790	1790	1790	1.39 U	1790	206	7.02 U	12.7 U
sculpin	whole-body	PCB114	9	9	100	133	4890	02R001	1140	700	1730	133	4890	1140	700	1730
sculpin	whole-body	PCB118	9	9	100	7210	129000	02R001	36700	33000	42500	7210	129000	36700	33000	42500
sculpin	whole-body	PCB120	9	9	100	52.5 T	342	06R002	151	136	229	52.5 T	342	151	136	229
sculpin	whole-body	PCB121	9	9	100	12.6 T	419	06R002	79.5	24.8	86.1	12.6 T	419	79.5	24.8	86.1
sculpin	whole-body	PCB122	9	8	88.9	13.1	255	02R001	91.4	26.8	232 T	11.8 U	255	82.5	26.8	232 T

Table 4-14. Round 1 Summary Statistics of Chemical Concentrations in Sculpin Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
sculpin	whole-body	PCB123	9	9	100	84.2	2760	02R001	625	457	689 T	84.2	2760	625	457	689 T
sculpin	whole-body	PCB126	9	9	100	22.1	177	02R001	60	58.2	64.1 T	22.1	177	60	58.2	64.1 T
sculpin	whole-body	PCB127	9	8	88.9	22.9	201	02R001	79.9	53.8	101	1.95 U	201	71.2	53.8	101
sculpin	whole-body	PCB128 & 166	9	9	100	2190 J	13200 J	06R002	6820	7010 J	13200 J	2190 J	13200 J	6820	7010 J	13200 J
sculpin	whole-body	PCB129 & 138 & 160 & 163	9	9	100	18700 J	293000 J	06R002	80300	46400 JT	91200 J	18700 J	293000 J	80300	46400 JT	91200 J
sculpin	whole-body	PCB130	9	9	100	450	4190	06R002	1690	1540 T	2490	450	4190	1690	1540 T	2490
sculpin	whole-body	PCB131	9	9	100	14.9	206	06R002	79.2	84.5 T	119	14.9	206	79.2	84.5 T	119
sculpin	whole-body	PCB132	9	9	100	650	5610	06R002	2450	2230 T	3740	650	5610	2450	2230 T	3740
sculpin	whole-body	PCB133	9	9	100	435	3490	06R002	1220	851	1810	435	3490	1220	851	1810
sculpin	whole-body	PCB134 & 143	9	9	100	151 J	2280 J	06R002	688	490 JT	818 J	151 J	2280 J	688	490 JT	818 J
sculpin	whole-body	PCB135 & 151 & 154	9	9	100	3580 J	63800 J	06R002	16800	9830 J	25500 J	3580 J	63800 J	16800	9830 J	25500 J
sculpin	whole-body	PCB136	9	9	100	520	7510	06R002	2210	1300	2680	520	7510	2210	1300	2680
sculpin	whole-body	PCB137	9	9	100	658	5390	02R001	2330	2430	3270	658	5390	2330	2430	3270
sculpin	whole-body	PCB139 & 140	9	9	100	269 J	1780 J	02R001	843	800 JT	1220 J	269 J	1780 J	843	800 JT	1220 J
sculpin	whole-body	PCB141	9	9	100	2480	48200	06R002	11800	6650	12400	2480	48200	11800	6650	12400
sculpin	whole-body	PCB142	9	3	33.3	13.8	49.9	07R006	26.6	16.2	16.2	1.55 U	49.9	13.3	10.6 UT	16.2
sculpin	whole-body	PCB144	9	9	100	267	5690	06R002	1330	758	1380	267	5690	1330	758	1380
sculpin	whole-body	PCB145	9	6	66.7	1.65	9.73	06R002	4.96	3.28	8.05	1.65	9.73	4.31	3.28	8.05
sculpin	whole-body	PCB146	9	9	100	3220	32100	06R002	11600	7920	20700	3220	32100	11600	7920	20700
sculpin	whole-body	PCB147 & 149	9	9	100	1650 J	18900 J	06R002	7490	5330 J	16800 J	1650 J	18900 J	7490	5330 J	16800 J
sculpin	whole-body	PCB148	9	9	100	32.4 T	459	06R002	121	68.2	192	32.4 T	459	121	68.2	192
sculpin	whole-body	PCB150	9	9	100	5.89	36.1	06R002	15.9	11.9	35.1	5.89	36.1	15.9	11.9	35.1
sculpin	whole-body	PCB152	9	9	100	14.8	472	06R002	89.5	37.7	78.4	14.8	472	89.5	37.7	78.4
sculpin	whole-body	PCB153 & 168	9	9	100	22100 J	369000 J	06R002	92800	59800 J	106000 J	22100 J	369000 J	92800	59800 J	106000 J
sculpin	whole-body	PCB155	9	8	88.9	8.17	278	06R002	51.1	12	42.6	7.61 UT	278	46.3	12	42.6
sculpin	whole-body	PCB156	9	9	100	1620	15300	06R002	5050	3990	7200	1620	15300	5050	3990	7200
sculpin	whole-body	PCB157	9	9	100	236	1490	02R001	706	787	945	236	1490	706	787	945
sculpin	whole-body	PCB158	9	9	100	1790	20800	06R002	6760	4520 T	9350	1790	20800	6760	4520 T	9350
sculpin	whole-body	PCB159	9	9	100	30.5	714	06R002	154	55.3	198	30.5	714	154	55.3	198
sculpin	whole-body	PCB161	9	0	0							1.36 U	12.2 U	7.5	6.71 U	12.1 U
sculpin	whole-body	PCB162	9	9	100	68.4	290	02R001	169	170 T	267	68.4	290	169	170 T	267
sculpin	whole-body	PCB164	9	9	100	464	6710	06R002	2310	1490	3720	464	6710	2310	1490	3720
sculpin	whole-body	PCB165	9	9	100	16.1 T	207	06R002	64.3	41.4	111	16.1 T	207	64.3	41.4	111
sculpin	whole-body	PCB167	9	9	100	524	4800	06R002	1820	1670 T	2380	524	4800	1820	1670 T	2380
sculpin	whole-body	PCB169	9	9	100	1.25	6.39	06R002	2.67	2.1	4.5	1.25	6.39	2.67	2.1	4.5
sculpin	whole-body	PCB170	9	9	100	6060 T	154000	06R002	28200	13600	23800	6060 T	154000	28200	13600	23800
sculpin	whole-body	PCB171 & 173	9	9	100	1760 JT	47300 J	06R002	8460	4110 J	7080 J	1760 JT	47300 J	8460	4110 J	7080 J
sculpin	whole-body	PCB172	9	9	100	994 T	25200	06R002	4780	2390	4900	994 T	25200	4780	2390	4900
sculpin	whole-body	PCB174	9	9	100	709	20500	06R002	3910	1460	4430	709	20500	3910	1460	4430
sculpin	whole-body	PCB175	9	9	100	147	4370	06R002	771	331	631	147	4370	771	331	631
sculpin	whole-body	PCB176	9	9	100	62	1590	06R002	301	101	279	62	1590	301	101	279
sculpin	whole-body	PCB177	9	9	100	951	36000	06R002	6070	1940	5430	951	36000	6070	1940	5430
sculpin	whole-body	PCB178	9	9	100	1230 T	25600	06R002	5280	2900	5880	1230 T	25600	5280	2900	5880
sculpin	whole-body	PCB179	9	9	100	760	23400	06R002	4190	1690	3440	760	23400	4190	1690	3440
sculpin	whole-body	PCB180 & 193	9	9	100	16600 JT	385000 J	06R002	75000	41400 J	74700 J	16600 JT	385000 J	75000	41400 J	74700 J

Table 4-14. Round 1 Summary Statistics of Chemical Concentrations in Sculpin Tissue.

Species	Tissue Type	Analyte	N	N Detected	% Detected	Detected Concentrations Minimum	Maximum	Location	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th UCL
sculpin	whole-body	PCB181	9	9	100	86 T	1290	07R006	303	122	661	86 T	1290	303	122	661
sculpin	whole-body	PCB182	9	9	100	38.6	325	06R002	100	60.9	163	38.6	325	100	60.9	163
sculpin	whole-body	PCB183 & 185	9	9	100	4390 J	110000 J	06R002	20400	10800 J	18400 J	4390 J	110000 J	20400	10800 J	18400 J
sculpin	whole-body	PCB184	9	6	66.7	7.28	38.1	06R002	15.9	9.13	18	7.28	38.1	14.8	12.8 U	18
sculpin	whole-body	PCB186	9	2	22.2	7.65	13.9	07R006	10.8	7.65	7.65	0.81 U	13.9	5.92	7.14 UT	7.65
sculpin	whole-body	PCB187	9	9	100	5960	137000	06R002	30600	12100	49300	5960	137000	30600	12100	49300
sculpin	whole-body	PCB188	9	7	77.8	13.9	135	06R002	41.7	28.2	45.8	13.5 UT	135	35.5	23.1	45.8
sculpin	whole-body	PCB189	9	9	100	193	3970	06R002	806	416	826	193	3970	806	416	826
sculpin	whole-body	PCB190	9	9	100	1410 T	38300	06R002	6980	3360	6130	1410 T	38300	6980	3360	6130
sculpin	whole-body	PCB191	9	9	100	294 T	6970	06R002	1280	608	1100	294 T	6970	1280	608	1100
sculpin	whole-body	PCB192	9	0	0							0.731 U	6.72 U	4.01	3.69 U	6.66 U
sculpin	whole-body	PCB194	9	9	100	2120	62500	06R002	10900	3630	10400	2120	62500	10900	3630	10400
sculpin	whole-body	PCB195	9	9	100	863 T	24500	06R002	4530	2140	4560	863 T	24500	4530	2140	4560
sculpin	whole-body	PCB196	9	9	100	1310	35500	06R002	6290	2980	5490	1310	35500	6290	2980	5490
sculpin	whole-body	PCB197 & 200	9	9	100	146 J	3090 J	06R002	588	303 J	548 J	146 J	3090 J	588	303 J	548 J
sculpin	whole-body	PCB198 & 199	9	9	100	2070 J	53300 J	06R002	9880	3600 J	11000 J	2070 J	53300 J	9880	3600 J	11000 J
sculpin	whole-body	PCB201	9	9	100	173	5350	06R002	945	397	800	173	5350	945	397	800
sculpin	whole-body	PCB202	9	9	100	544	8340	06R002	1870	950	2050	544	8340	1870	950	2050
sculpin	whole-body	PCB203	9	9	100	2120	42100	06R002	8070	4060	7710	2120	42100	8070	4060	7710
sculpin	whole-body	PCB204	9	3	33.3	2.28	40.2	07R006	15	2.43	2.43	2.28	40.2	14.1	9.75 U	17.8 U
sculpin	whole-body	PCB205	9	9	100	105 T	2840	06R002	525	216	579	105 T	2840	525	216	579
sculpin	whole-body	PCB206	9	9	100	660	7780	06R002	1830	1110 T	1770	660	7780	1830	1110 T	1770
sculpin	whole-body	PCB207	9	9	100	105	1190	06R002	300	166	366	105	1190	300	166	366
sculpin	whole-body	PCB208	9	9	100	139	1170	06R002	341	264 T	320	139	1170	341	264 T	320
sculpin	whole-body	PCB209	9	9	100	148	785	07R006	258	198	246	148	785	258	198	246
		Dioxins/Furans (pg/g)														
sculpin	whole-body	Tetrachlorodibenzo-p-dioxin	9	9	100	0.119	0.469 T	06R002	0.283	0.256	0.438	0.119	0.469 T	0.283	0.256	0.438
sculpin	whole-body	Pentachlorodibenzo-p-dioxin	9	9	100	0.187	1.51 T	06R002	0.617	0.481	1.33	0.187	1.51 T	0.617	0.481	1.33
sculpin	whole-body	Hexachlorodibenzo-p-dioxin	9	9	100	0.657	3.85 T	06R002	1.99	1.42	3.78	0.657	3.85 T	1.99	1.42	3.78
sculpin	whole-body	Heptachlorodibenzo-p-dioxin	9	9	100	1.43	17.7	07R006	5.44	2.29	10.8	1.43	17.7	5.44	2.29	10.8
sculpin	whole-body	Octachlorodibenzo-p-dioxin	9	9	100	3.05	40	06R002	13.4	4.71	37.9	3.05	40	13.4	4.71	37.9
sculpin	whole-body	Tetrachlorodibenzofuran	9	9	100	1.27	117	07R006	17	2.26	18.6	1.27	117	17	2.26	18.6
sculpin	whole-body	Pentachlorodibenzofuran	9	9	100	1	117	07R006	19.5	2.15	37.4 T	1	117	19.5	2.15	37.4 T
sculpin	whole-body	Hexachlorodibenzofuran	9	9	100	0.529	89.2	07R006	13.3	2.46	15.3 T	0.529	89.2	13.3	2.46	15.3 T
sculpin	whole-body	Heptachlorodibenzofuran	9	9	100	0.316	5.32	07R006	1.66	0.886	3.32	0.316	5.32	1.66	0.886	3.32
sculpin	whole-body	Octachlorodibenzofuran	9	9	100	0.115	1.56	07R006	0.54	0.458 T	1.21	0.115	1.56	0.54	0.458 T	1.21
sculpin	whole-body	2,3,7,8-Tetrachlorodibenzo-p-dioxin	9	9	100	0.119	0.446 T	06R002	0.259	0.238	0.402	0.119	0.446 T	0.259	0.238	0.402
sculpin	whole-body	2,3,7,8-TCDD TEQ	9	9	100	7.03 T	54.1 T	07R006	21.2	15.6 T	44.6 T	7.03 T	54.1 T	21.2	15.6 T	44.6 T
sculpin	whole-body	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	9	9	100	0.187	1.46 T	06R002	0.587	0.469	1.25	0.187	1.46 T	0.587	0.469	1.25
sculpin	whole-body	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	9	8	88.9	0.052	0.308 T	06R002	0.165	0.121	0.302	0.052	0.308 T	0.155	0.121	0.302
sculpin	whole-body	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	9	9	100	0.457	2.77 T	06R002	1.26	0.866	2.41	0.457	2.77 T	1.26	0.866	2.41
sculpin	whole-body	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	9	9	100	0.078	0.415 T	06R002	0.198	0.14	0.37	0.078	0.415 T	0.198	0.14	0.37
sculpin	whole-body	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	9	9	100	1.09	6.71	06R002	3.14	1.68	6.3	1.09	6.71	3.14	1.68	6.3
sculpin	whole-body	2,3,7,8-Tetrachlorodibenzofuran	9	9	100	1.37	123	07R006	17.4	1.92	20.3	1.37	123	17.4	1.92	20.3
sculpin	whole-body	1,2,3,7,8-Pentachlorodibenzofuran	9	9	100	0.241	86	07R006	10.7	0.358	6.86	0.241	86	10.7	0.358	6.86

Table 4-14. Round 1 Summary Statistics of Chemical Concentrations in Sculpin Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
sculpin	whole-body	2,3,4,7,8-Pentachlorodibenzofuran	9	9	100	0.329	25.3	07R006	3.85	0.618	3.6	0.329	25.3	3.85	0.618	3.6
sculpin	whole-body	1,2,3,4,7,8-Hexachlorodibenzofuran	9	9	100	0.188	77.1	07R006	9.18	0.445	2.55	0.188	77.1	9.18	0.445	2.55
sculpin	whole-body	1,2,3,6,7,8-Hexachlorodibenzofuran	9	9	100	0.07	9.01	07R006	1.27	0.218	0.974 T	0.07	9.01	1.27	0.218	0.974 T
sculpin	whole-body	1,2,3,7,8,9-Hexachlorodibenzofuran	9	3	33.3	0.016 J	0.444	07R006	0.162	0.026	0.026	0.011 U	0.444	0.0696	0.025 UT	0.041 U
sculpin	whole-body	2,3,4,6,7,8-Hexachlorodibenzofuran	9	9	100	0.04 J	0.84	07R006	0.236	0.127	0.611 T	0.04 J	0.84	0.236	0.127	0.611 T
sculpin	whole-body	1,2,3,4,6,7,8-Heptachlorodibenzofuran	9	9	100	0.144	2.56	07R006	0.699	0.393	1.01	0.144	2.56	0.699	0.393	1.01
sculpin	whole-body	1,2,3,4,7,8,9-Heptachlorodibenzofuran	9	8	88.9	0.02	1.6	07R006	0.257	0.075 J	0.136 T	0.02	1.6	0.235	0.075 J	0.136 T

Notes:

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table 4-15. Round 1 Summary Statistics of Chemical Concentrations in Smallmouth Bass Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
		Conventionals (percent)														
smallmouth bass	fillet	Total solids	5	5	100	21.3	22.7	06R024	21.9	21.6	22.4	21.3	22.7	21.9	21.6	22.4
smallmouth bass	whole body	Total solids	14	14	100	21.5	32	08R032	29.8	30.2	31.5	21.5	32	29.8	30.2	31.5
smallmouth bass	fillet	Lipids	5	5	100	0.32	1.1	05R006	0.818	0.9	0.96	0.32	1.1	0.818	0.9	0.96
smallmouth bass	whole body	Lipids	14	14	100	1.5 T	7.2 T	04R023	5.44	5.5 T	7 T	1.5 T	7.2 T	5.44	5.5 T	7 T
		Metals (mg/kg)														
smallmouth bass	fillet	Aluminum	5	5	100	2.54 J	7.15 J	06R024	4.09	3.52 J	3.83 J	2.54 J	7.15 J	4.09	3.52 J	3.83 J
smallmouth bass	whole body	Aluminum	14	14	100	2.12 J	11 J	04R023	5.6	4.78 J	10.2 J	2.12 J	11 J	5.6	4.78 J	10.2 J
smallmouth bass	fillet	Antimony	5	0	0							0.001 U	0.003 U	0.0018	0.002 U	0.002 U
smallmouth bass	whole body	Antimony	14	2	14.3	0.001 J	0.001 J	06R024	0.001	0.001 J	0.001 J	0.001 J	0.004 U	0.00186	0.001 U	0.003 U
smallmouth bass	fillet	Arsenic	5	5	100	0.18	0.28	03R014	0.21	0.2	0.2	0.18	0.28	0.21	0.2	0.2
smallmouth bass	whole body	Arsenic	14	14	100	0.17	0.39	03R014	0.264	0.25	0.34	0.17	0.39	0.264	0.25	0.34
smallmouth bass	fillet	Cadmium	5	2	40	0.001 J	0.001 J	08R032	0.001	0.001 J	0.001 J	0.001 U	0.001 U	0.001	0.001 J	0.001 J
smallmouth bass	whole body	Cadmium	14	10	71.4	0.002 J	0.024 J	06R024	0.0073	0.004 J	0.009 J	0.002 J	0.024 J	0.00586	0.003 U	0.009 J
smallmouth bass	fillet	Chromium	5	0	0							0.06 U	0.07 U	0.064	0.06 U	0.07 U
smallmouth bass	whole body	Chromium	14	12	85.7	0.17	1.14	08R010	0.58	0.44	1.03	0.06 U	1.14	0.508	0.41	1.03
smallmouth bass	fillet	Copper	5	5	100	0.187	1.12	05R006	0.541	0.248	0.935	0.187	1.12	0.541	0.248	0.935
smallmouth bass	whole body	Copper	14	14	100	0.365	1.29	09R006	0.652	0.519	0.953	0.365	1.29	0.652	0.519	0.953
smallmouth bass	fillet	Lead	5	1	20	0.011	0.011	05R006	0.011	0.011	0.011	0.002 U	0.011	0.0046	0.003 U	0.004 U
smallmouth bass	whole body	Lead	14	14	100	0.0048 J	0.303 J	08R010	0.0423	0.007	0.133 J	0.0048 J	0.303 J	0.0423	0.007	0.133 J
smallmouth bass	fillet	Manganese	5	5	100	0.076	0.094	06R024	0.0842	0.084	0.087	0.076	0.094	0.0842	0.084	0.087
smallmouth bass	whole body	Manganese	14	14	100	0.445 J	2.65	09R006	1.25	1 T	2.05	0.445 J	2.65	1.25	1 T	2.05
smallmouth bass	fillet without skin	Mercury	5	5	100	0.071	0.129 T	03R014	0.0946	0.087	0.113	0.071	0.129 T	0.0946	0.087	0.113
smallmouth bass	whole body	Mercury	14	14	100	0.052	0.114	04R023	0.0831	0.078	0.106	0.052	0.114	0.0831	0.078	0.106
smallmouth bass	fillet	Nickel	5	5	100	0.004 J	0.224	05R006	0.073	0.008 J	0.124	0.004 J	0.224	0.073	0.008 J	0.124
smallmouth bass	whole body	Nickel	14	7	50	0.07	0.2	04R023	0.127	0.13	0.16	0.02 U	0.2	0.0857	0.07 U	0.16
smallmouth bass	fillet	Selenium	5	0	0							0.2 U	0.3 U	0.22	0.2 U	0.2 U
smallmouth bass	whole body	Selenium	14	3	21.4	0.3 T	0.4	07R009	0.333	0.3	0.3	0.2 U	0.4	0.3	0.3 U	0.3
smallmouth bass	fillet	Silver	5	0	0							0.0002 U	0.0003 U	0.00022	0.0002 U	0.0002 U
smallmouth bass	whole body	Silver	14	0	0							0.0002 U	0.007 U	0.00371	0.0037 UJ	0.0055 UJ
smallmouth bass	fillet	Thallium	5	5	100	0.0025 J	0.0102	03R014	0.00446	0.0033 J	0.0035 J	0.0025 J	0.0102	0.00446	0.0033 J	0.0035 J
smallmouth bass	whole body	Thallium	14	14	100	0.002 J	0.0085	03R014	0.00431	0.0035 JT	0.0077	0.002 J	0.0085	0.00431	0.0035 JT	0.0077
smallmouth bass	fillet	Zinc	5	5	100	8 J	10.9 J	05R006	9.11	8.67 J	9.6 J	8 J	10.9 J	9.11	8.67 J	9.6 J
smallmouth bass	whole body	Zinc	14	14	100	13.4	16.3	03R014	14.7	14.5	16	13.4	16.3	14.7	14.5	16
		PCB Aroclors (ug/kg)														
smallmouth bass	fillet	Aroclor 1016	5	0	0							1.9 U	1.9 U	1.9	1.9 U	1.9 U
smallmouth bass	whole body	Aroclor 1016	14	0	0							4.7 U	190 U	45	23 U	190 U
smallmouth bass	fillet	Aroclor 1242	5	0	0							1.9 U	1.9 U	1.9	1.9 U	1.9 U
smallmouth bass	whole body	Aroclor 1242	14	0	0							5.8 U	190 UJ	46.6	33 U	190 UJ
smallmouth bass	fillet	Aroclor 1248	5	5	100	19	34	09R006	26	26	31	19	34	26	26	31
smallmouth bass	whole body	Aroclor 1248	14	8	57.1	120	460	03R014	303	250	410 J	23 U	520 UJ	251	220 J	460
smallmouth bass	fillet	Aroclor 1254	5	0	0							27 U	57 U	41	37 U	52 U
smallmouth bass	whole body	Aroclor 1254	14	0	0							83 U	2200 UJ	557	390 UJ	1300 UJ
smallmouth bass	fillet	Aroclor 1260	5	5	100	19	62	08R032	36	34	38	19	62	36	34	38
smallmouth bass	whole body	Aroclor 1260	14	14	100	90 J	4500 J	08R010	939	370 J	3300 J	90 J	4500 J	939	370 J	3300 J
smallmouth bass	fillet	Aroclor 1262	5	0	0							1.9 U	1.9 U	1.9	1.9 U	1.9 U
smallmouth bass	whole body	Aroclor 1262	14	0	0							3.8 U	190 UJ	43.3	9.5 U	190 UJ

Table 4-15. Round 1 Summary Statistics of Chemical Concentrations in Smallmouth Bass Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
smallmouth bass	fillet	Aroclor 1268	5	0	0							1.9 U	1.9 U	1.9	1.9 U	1.9 U
smallmouth bass	whole body	Aroclor 1268	14	0	0							3.8 U	190 UJ	43.3	9.5 U	190 UJ
smallmouth bass	fillet	Aroclor 1221	5	0	0							1.9 U	1.9 U	1.9	1.9 U	1.9 U
smallmouth bass	whole body	Aroclor 1221	14	0	0							4.6 U	190 U	49.3	36 U	190 U
smallmouth bass	fillet	Aroclor 1232	5	0	0							1.9 U	1.9 U	1.9	1.9 U	1.9 U
smallmouth bass	whole body	Aroclor 1232	14	1	7.14	12 J	12 J	06R024	12	12 J	12 J	7.6 U	190 U	48.7	38 U	190 U
smallmouth bass	fillet	Total PCB Aroclors	5	5	100	39 T	93 T	08R032	62	60 T	72 T	39 T	93 T	62	60 T	72 T
smallmouth bass	whole body	Total PCB Aroclors	14	14	100	90 JT	4500 JT	08R010	1110	780 T	3300 JT	90 JT	4500 JT	1110	780 T	3300 JT
		Organochlorine Pesticides (ug/kg)														
smallmouth bass	fillet	2,4'-DDD	5	1	20	1.4 NJ	1.4 NJ	06R024	1.4	1.4 NJ	1.4 NJ	1 U	1.4 NJ	1.16	1.1 U	1.2 U
smallmouth bass	whole body	2,4'-DDD	14	3	21.4	9.6 JT	29 T	07R009	17.2	13 JT	13 JT	4.9 UT	29 T	9.54	8.6 UT	13 JT
smallmouth bass	fillet	2,4'-DDE	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	2,4'-DDE	14	0	0							1 UT	7.5 UT	4.82	4 UT	7.5 UT
smallmouth bass	fillet	2,4'-DDT	5	5	100	2 NJ	5.2 NJ	08R032	3.56	3.1 NJ	4.6 J	2 NJ	5.2 NJ	3.56	3.1 NJ	4.6 J
smallmouth bass	whole body	2,4'-DDT	14	2	14.3	17 JT	30 T	07R009	23.5	17 JT	17 JT	6.9 UT	30 T	9.27	6.9 UT	17 JT
smallmouth bass	fillet	4,4'-DDD	5	5	100	1.9 N	5	06R024	3.58	4.1 J	4.2 J	1.9 N	5	3.58	4.1 J	4.2 J
smallmouth bass	whole body	4,4'-DDD	14	14	100	11 JT	110 T	07R009	37.9	31 JT	58 T	11 JT	110 T	37.9	31 JT	58 T
smallmouth bass	fillet	4,4'-DDE	5	5	100	12	25	03R014	16	14	16	12	25	16	14	16
smallmouth bass	whole body	4,4'-DDE	14	14	100	53 JT	220 T	04R023	132	128 JT	190 T	53 JT	220 T	132	128 JT	190 T
smallmouth bass	fillet	4,4'-DDT	5	5	100	5.6	10	08R032	7.34	6.6	8.3	5.6	10	7.34	6.6	8.3
smallmouth bass	whole body	4,4'-DDT	14	9	64.3	7.3 JT	130 T	07R009	43.4	27 T	98 T	6.3 UT	130 T	30.1	15 JT	98 T
smallmouth bass	fillet	Total of 3 isomers: pp-DDT,-DDD,-DDE	5	5	100	21.1 JT	37.4 JT	03R014	26.9	24.8 JT	28.7 JT	21.1 JT	37.4 JT	26.9	24.8 JT	28.7 JT
smallmouth bass	whole body	Total of 3 isomers: pp-DDT,-DDD,-DDE	14	14	100	65 JT	378 T	07R009	198	178 JT	333 T	65 JT	378 T	198	178 JT	333 T
smallmouth bass	fillet	Aldrin	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	Aldrin	14	0	0							1 UT	13 UT	5.07	4 UT	13 UT
smallmouth bass	fillet	alpha-Hexachlorocyclohexane	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	alpha-Hexachlorocyclohexane	14	0	0							1 UT	6.4 UT	3.87	4 UT	6.4 UT
smallmouth bass	fillet	beta-Hexachlorocyclohexane	5	1	20	4.5 N	4.5 N	03R014	4.5	4.5 N	4.5 N	1 U	4.5 N	1.7	1 U	1 U
smallmouth bass	whole body	beta-Hexachlorocyclohexane	14	0	0							1.2 UJT	8.5 UT	5.86	4 UT	8.5 UT
smallmouth bass	fillet	delta-Hexachlorocyclohexane	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	delta-Hexachlorocyclohexane	14	0	0							1 UT	7.3 UT	4.06	4 UT	7.3 UT
smallmouth bass	fillet	gamma-Hexachlorocyclohexane	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	gamma-Hexachlorocyclohexane	14	0	0							1 UT	9.6 UT	4.96	4 UT	9.6 UT
smallmouth bass	fillet	cis-Chlordane	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	cis-Chlordane	14	2	14.3	5.4 NJ	5.6 NJ	07R009	5.5	5.4 NJ	5.4 NJ	1.2 UJ	20 U	6.59	4 U	20 U
smallmouth bass	fillet	trans-Chlordane	5	0	0							1 U	2.4 U	1.36	1 U	1.4 U
smallmouth bass	whole body	trans-Chlordane	14	0	0							1 UJT	8.4 UT	4.93	4 UT	8.4 UT
smallmouth bass	fillet	Oxychlordane	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	Oxychlordane	14	0	0							1 UT	32 UT	8.29	4 UT	20 UT
smallmouth bass	fillet	cis-Nonachlor	5	0	0							1.3 U	2.9 U	2.26	2.4 U	2.9 U
smallmouth bass	whole body	cis-Nonachlor	14	0	0							7.1 UT	7.1 UT	7.1	7.1 UT	7.1 UT
smallmouth bass	fillet	trans-Nonachlor	5	3	60	1.8 NJ	4.1 NJ	03R014	2.97	3 NJ	3 NJ	1 U	4.1 NJ	2.46	2.4 U	3 NJ
smallmouth bass	whole body	trans-Nonachlor	14	0	0							6.6 UT	11 UT	10.6	11 UT	11 UT
smallmouth bass	fillet	Dieldrin	5	3	60	1 NJ	3.3 NJ	03R014	1.9	1.4 NJ	1.4 NJ	1 U	3.3 NJ	1.54	1 NJ	1.4 NJ
smallmouth bass	whole body	Dieldrin	14	1	7.14	7.3 JT	7.3 JT	08R032	7.3	7.3 JT	7.3 JT	4 UT	20 UT	12.2	14 UT	20 UT
smallmouth bass	fillet	alpha-Endosulfan	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	alpha-Endosulfan	14	1	7.14	8.4 J	8.4 J	08R010	8.4	8.4 J	8.4 J	1 U	20 U	5.29	4 U	10 U

Table 4-15. Round 1 Summary Statistics of Chemical Concentrations in Smallmouth Bass Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
smallmouth bass	fillet	beta-Endosulfan	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	beta-Endosulfan	14	0	0							1 UJT	20 UT	6.11	4 UT	20 UT
smallmouth bass	fillet	Endosulfan sulfate	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	Endosulfan sulfate	14	0	0							1 UJT	20 UT	6.07	4 UT	20 UT
smallmouth bass	fillet	Endrin	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	Endrin	14	0	0							1 UJT	31 UT	10	4 UT	31 UT
smallmouth bass	fillet	Endrin aldehyde	5	2	40	1.5 NJ	2 NJ	03R014	1.75	1.5 NJ	1.5 NJ	1 UJ	2 NJ	1.3	1 UJ	1.5 NJ
smallmouth bass	whole body	Endrin aldehyde	14	0	0							1 UJT	20 UT	6.25	4 UT	20 UT
smallmouth bass	fillet	Endrin ketone	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	Endrin ketone	14	0	0							1 UJT	20 UT	5.89	4 UT	20 UT
smallmouth bass	fillet	Heptachlor	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	Heptachlor	14	0	0							1 UT	13 UT	5.15	4 UT	13 UT
smallmouth bass	fillet	Heptachlor epoxide	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	Heptachlor epoxide	14	0	0							1 UT	8 UT	4.44	4 UT	8 UT
smallmouth bass	fillet	Methoxychlor	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	Methoxychlor	14	0	0							4 UT	20 UT	6.74	4.8 UT	20 UT
smallmouth bass	fillet	Mirex	5	0	0							1 U	1 U	1	1 U	1 U
smallmouth bass	whole body	Mirex	14	0	0							1 UJT	6.2 UT	3.83	4 UT	6.2 UT
smallmouth bass	fillet	Toxaphene	5	0	0							72 U	180 U	116	110 U	130 U
smallmouth bass	whole body	Toxaphene	14	0	0							350 UJ	6100 U	1490	620 UJ	5600 U
		Semivolatile Organic Compounds (ug/kg)														
smallmouth bass	whole body	1,2,4-Trichlorobenzene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	1,2-Dichlorobenzene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	1,2-Diphenylhydrazine	14	0	0							25 U	33 U	30.9	31 U	33 U
smallmouth bass	whole body	1,3-Dichlorobenzene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	1,4-Dichlorobenzene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	Azobenzene	14	0	0							130 U	160 U	153	150 U	160 U
smallmouth bass	whole body	Bis(2-chloro-1-methylethyl) ether	14	0	0							130 U	160 U	153	150 U	160 U
smallmouth bass	whole body	2,4-Dinitrotoluene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	2,6-Dinitrotoluene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	2-Chloronaphthalene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	2-Nitroaniline	14	0	0							630 U	820 U	768	770 U	820 U
smallmouth bass	whole body	3,3'-Dichlorobenzidine	14	0	0							1300 U	1600 U	1530	1500 U	1600 U
smallmouth bass	whole body	3-Nitroaniline	14	0	0							630 U	820 U	768	770 U	820 U
smallmouth bass	whole body	4-Bromophenyl phenyl ether	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	4-Chloroaniline	14	0	0							130 UT	160 UT	153	150 UT	160 UT
smallmouth bass	whole body	4-Chlorophenyl phenyl ether	14	0	0							63 UT	82 UT	76.8	77 UT	82 UT
smallmouth bass	whole body	4-Nitroaniline	14	0	0							630 U	820 U	768	770 U	820 U
smallmouth bass	whole body	Aniline	12	0	0							1600 U	1700 U	1670	1700 U	1700 U
smallmouth bass	whole body	Benzoic acid	14	0	0							8200 U	8300 U	8270	8300 U	8300 U
smallmouth bass	whole body	Benzyl alcohol	14	0	0							250 U	330 U	309	310 U	330 U
smallmouth bass	whole body	Bis(2-chloroethoxy) methane	14	0	0							130 U	160 U	153	150 U	160 U
smallmouth bass	whole body	Bis(2-chloroethyl) ether	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	Carbazole	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	Dibenzofuran	14	2	14.3	49 T	52 T	07R009	50.5	49 T	49 T	25 UT	52 T	33.6	31 UT	49 T
smallmouth bass	fillet	Hexachlorobenzene	5	0	0							1 U	1.3 U	1.06	1 U	1 U
smallmouth bass	whole body	Hexachlorobenzene	14	0	0							1 UT	6.4 UT	5.84	6.4 UT	6.4 UT

Table 4-15. Round 1 Summary Statistics of Chemical Concentrations in Smallmouth Bass Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	**Tissue Type**	**Analyte**	**N**	**Detected**	**Detected**	**Minimum**	**Maximum**	**Location**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th UCL**
smallmouth bass	fillet	Hexachlorobutadiene	5	0	0							1 UJ	1 UJ	1	1 UJ	1 UJ
smallmouth bass	whole body	Hexachlorobutadiene	14	0	0							1 UJT	4.6 UT	4	4 UJT	4.6 UT
smallmouth bass	whole body	Hexachlorocyclopentadiene	14	0	0							630 UJ	820 UJ	768	770 UJ	820 UJ
smallmouth bass	fillet	Hexachloroethane	5	0	0							1 UJ	1 UJ	1	1 UJ	1 UJ
smallmouth bass	whole body	Hexachloroethane	14	0	0							1 UJT	13 UT	5.07	4 UJT	13 UT
smallmouth bass	whole body	Isophorone	14	0	0							1600 U	1700 U	1670	1700 U	1700 U
smallmouth bass	whole body	Nitrobenzene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	N-Nitrosodimethylamine	14	0	0							130 UJT	170 UT	156	160 UJT	170 UT
smallmouth bass	whole body	N-Nitrosodipropylamine	14	0	0							25 UJT	33 UJT	30.9	31 UJT	33 UJT
smallmouth bass	whole body	N-Nitrosodiphenylamine	14	0	0							130 U	160 U	153	150 U	160 U
		Phenols (ug/kg)														
smallmouth bass	whole body	2,4,5-Trichlorophenol	14	0	0							630 U	820 U	768	770 U	820 U
smallmouth bass	whole body	2,4,6-Trichlorophenol	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	2,4-Dichlorophenol	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	2,4-Dimethylphenol	14	0	0							380 U	490 U	461	460 U	490 U
smallmouth bass	whole body	2,4-Dinitrophenol	14	0	0							2500 U	3300 U	3090	3100 U	3300 U
smallmouth bass	whole body	2-Chlorophenol	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	2-Methylphenol	14	0	0							130 U	160 U	153	150 U	160 U
smallmouth bass	whole body	2-Nitrophenol	14	0	0							1600 U	1700 U	1670	1700 U	1700 U
smallmouth bass	whole body	4,6-Dinitro-2-methylphenol	14	0	0							2500 U	3300 U	3090	3100 U	3300 U
smallmouth bass	whole body	4-Chloro-3-methylphenol	14	0	0							250 U	330 U	309	310 U	330 U
smallmouth bass	whole body	4-Methylphenol	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	4-Nitrophenol	14	0	0							1300 U	1600 U	1530	1500 U	1600 U
smallmouth bass	whole body	Pentachlorophenol	14	0	0							130 UT	160 UT	153	150 UT	160 UT
smallmouth bass	whole body	Phenol	14	0	0							250 U	330 U	309	310 U	330 U
smallmouth bass	whole body	2,3,4,5-Tetrachlorophenol	14	0	0							1300 U	1600 U	1530	1500 U	1600 U
smallmouth bass	whole body	2,3,5,6-Tetrachlorophenol	14	0	0							1300 U	1600 U	1530	1500 U	1600 U
		Phthalates (ug/kg)														
smallmouth bass	whole body	Dimethyl phthalate	14	0	0							130 U	160 U	153	150 U	160 U
smallmouth bass	whole body	Diethyl phthalate	14	0	0							130 U	160 U	153	150 U	160 U
smallmouth bass	whole body	Dibutyl phthalate	14	0	0							250 U	330 U	309	310 U	330 U
smallmouth bass	whole body	Butylbenzyl phthalate	14	0	0							250 U	330 U	309	310 U	330 U
smallmouth bass	whole body	Di-n-octyl phthalate	14	3	21.4	460 T	2100 T	04R023	1220	1100	1100	250 U	2100 T	504	320 U	1100
smallmouth bass	whole body	Bis(2-ethylhexyl) phthalate	14	2	14.3	32000 JT	87000 JT	04R023	59500	32000 JT	32000 JT	86 UT	87000 JT	8750	96 UT	32000 JT
		PAHs (ug/kg)														
smallmouth bass	whole body	2-Methylnaphthalene	14	4	28.6	43 T	59 T	07R009	48.3	45 T	46 T	30 UT	59 T	36.1	32 UT	46 T
smallmouth bass	whole body	Acenaphthene	14	4	28.6	36 T	95 T	07R009	57	40 T	57 T	30 UT	95 T	42.3	32 UT	76 UT
smallmouth bass	whole body	Acenaphthylene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	Anthracene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	Fluorene	14	3	21.4	31 JT	69 T	07R009	49.7	49 T	49 T	25 UT	69 T	34.9	31 UT	49 T
smallmouth bass	whole body	Naphthalene	14	2	14.3	51 T	86 T	07R009	68.5	51 T	51 T	30 UT	86 T	36.8	32 UT	51 T
smallmouth bass	whole body	Phenanthrene	14	2	14.3	49 T	85 T	07R009	67	49 T	49 T	25 UT	85 T	36	31 UT	49 T
smallmouth bass	whole body	Low Molecular Weight PAH	14	7	50	31 JT	308 T	07R009	120	45 T	252 T	30 UT	308 T	75.7	32 UT	252 T
smallmouth bass	whole body	Dibenz(a,h)anthracene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	Benz(a)anthracene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	Benzo(a)pyrene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	Benzo(b)fluoranthene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT

Table 4-15. Round 1 Summary Statistics of Chemical Concentrations in Smallmouth Bass Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	**Tissue Type**	**Analyte**	**N**	**N Detected**	**% Detected**	**Minimum**	**Maximum**	**Location**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th UCL**
smallmouth bass	whole body	Benzo(g,h,i)perylene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	Benzo(k)fluoranthene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	Chrysene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	Fluoranthene	14	1	7.14	36 T	36 T	04R023	36	36 T	36 T	25 UT	36 T	31.3	31 UT	33 UT
smallmouth bass	whole body	Indeno(1,2,3-cd)pyrene	14	0	0							25 UT	33 UT	30.9	31 UT	33 UT
smallmouth bass	whole body	Pyrene	14	1	7.14	39 T	39 T	04R023	39	39 T	39 T	25 UT	39 T	31.5	31 UT	33 UT
smallmouth bass	whole body	High Molecular Weight PAH	14	1	7.14	75 T	75 T	04R023	75	75 T	75 T	25 UT	75 T	34.1	31 UT	33 UT
smallmouth bass	whole body	Polycyclic Aromatic Hydrocarbons	14	7	50	31 JT	308 T	07R009	131	111 T	252 T	30 UT	308 T	81.1	32 UT	252 T
		PCB Congeners (pg/g)														
smallmouth bass	whole body	PCB001	10	10	100	4.96 T	26.1	04R023	13.3	9.25	20.5 J	4.96 T	26.1	13.3	9.25	20.5 J
smallmouth bass	whole body	PCB002	10	7	70	1.58	6.12	08R010	3.39	2.02	5.86 J	1.58	6.12	2.91	1.94 J	5.86 J
smallmouth bass	whole body	PCB003	10	10	100	2.36	16.1 J	04R023	7.34	4.29	15.3 J	2.36	16.1 J	7.34	4.29	15.3 J
smallmouth bass	whole body	PCB004	14	14	100	87.2 JT	733	04R023	472	450	705 J	87.2 JT	733	472	450	705 J
smallmouth bass	whole body	PCB005	14	12	85.7	2.13	21.9	04R023	6.24	3.94 JT	9.97	1.99 UJT	21.9	5.66	3.17	9.97
smallmouth bass	whole body	PCB006	14	14	100	11 JT	267	04R023	74.3	43.9	130	11 JT	267	74.3	43.9	130
smallmouth bass	whole body	PCB007	14	13	92.9	6.42	50.7	04R023	14.1	10.3	22.8	3.16 UJT	50.7	13.3	8.41	22.8
smallmouth bass	whole body	PCB008	14	14	100	47.3 JT	1300	04R023	331	193 J	634	47.3 JT	1300	331	193 J	634
smallmouth bass	whole body	PCB009	14	14	100	2.56 JT	90.4	04R023	22.6	14.6	40.3	2.56 JT	90.4	22.6	14.6	40.3
smallmouth bass	whole body	PCB010	14	14	100	4.73 JT	53.4	07R009	22.9	18	45.5 J	4.73 JT	53.4	22.9	18	45.5 J
smallmouth bass	whole body	PCB011	14	14	100	87.5 JT	287	08R032	185	184	275 J	87.5 JT	287	185	184	275 J
smallmouth bass	whole body	PCB012 & 013	14	12	85.7	6.92 J	24.3 J	04R023	12.6	10.3 J	18.8 J	4.46 UJT	24.3 J	11.5	8.55 J	18.8 J
smallmouth bass	whole body	PCB014	14	0	0							0.375 U	3.84 U	2.76	3.14 U	3.21 U
smallmouth bass	whole body	PCB015	14	14	100	23.1 T	297	04R023	100	66.7	210	23.1 T	297	100	66.7	210
smallmouth bass	whole body	PCB016	14	14	100	71.6 T	1760	04R023	488	336	777	71.6 T	1760	488	336	777
smallmouth bass	whole body	PCB017	14	14	100	137 T	2900	04R023	1070	824	1530	137 T	2900	1070	824	1530
smallmouth bass	whole body	PCB018 & 030	14	14	100	202 JT	4930 J	04R023	1530	1010 J	2480 J	202 JT	4930 J	1530	1010 J	2480 J
smallmouth bass	whole body	PCB019	14	14	100	168 T	1810	07R009	831	760	1580	168 T	1810	831	760	1580
smallmouth bass	whole body	PCB020 & 028	14	14	100	985 JT	16900 J	04R023	6020	3840 J	10000 J	985 JT	16900 J	6020	3840 J	10000 J
smallmouth bass	whole body	PCB021 & 033	14	14	100	148 JT	4320 J	04R023	1150	690 J	1930 J	148 JT	4320 J	1150	690 J	1930 J
smallmouth bass	whole body	PCB022	14	14	100	183 T	3030	04R023	960	637	1700	183 T	3030	960	637	1700
smallmouth bass	whole body	PCB023	14	7	50	1.83	12.8	04R023	5.57	5.09	6.57	1.83	12.8	4.69	3.97 U	6.57
smallmouth bass	whole body	PCB024	14	13	92.9	7.04	68.3	04R023	23.5	15.8	41.9	4.18 UT	68.3	22.2	14.4	41.9
smallmouth bass	whole body	PCB025	14	14	100	55.2 T	2520	07R009	402	167	698	55.2 T	2520	402	167	698
smallmouth bass	whole body	PCB026 & 029	14	14	100	132 JT	5210 J	07R009	1040	461 J	2190 J	132 JT	5210 J	1040	461 J	2190 J
smallmouth bass	whole body	PCB027	14	14	100	32 T	439	04R023	203	181	291	32 T	439	203	181	291
smallmouth bass	whole body	PCB031	14	14	100	482 T	8850	04R023	2740	1870	4480	482 T	8850	2740	1870	4480
smallmouth bass	whole body	PCB032	14	14	100	100 T	1940	04R023	723	563	1200	100 T	1940	723	563	1200
smallmouth bass	whole body	PCB034	14	14	100	4.25 T	39.1	04R023	16.4	11.1	28.5	4.25 T	39.1	16.4	11.1	28.5
smallmouth bass	whole body	PCB035	14	4	28.6	19.3 J	51.9	03R014	30.5	22	28.9	0.401 U	51.9	10.1	2.35 U	28.9
smallmouth bass	whole body	PCB036	14	4	28.6	11.5	825	03R014	378	293	382	0.395 U	825	110	3.95 U	382
smallmouth bass	whole body	PCB037	14	14	100	60.3 T	740	04R023	280	190	494	60.3 T	740	280	190	494
smallmouth bass	whole body	PCB038	14	12	85.7	2.38 J	26.4	03R014	8.77	4.93 J	15.7	2.38 J	26.4	7.94	4.61	15.7
smallmouth bass	whole body	PCB039	14	11	78.6	8.43 JT	129	03R014	41.6	33.9 T	77.8	3.36 U	129	33.4	23.5	77.8
smallmouth bass	whole body	PCB040 & 041 & 071	14	14	100	870 JT	11500 J	03R014	3850	2660 J	7540 J	870 JT	11500 J	3850	2660 J	7540 J
smallmouth bass	whole body	PCB042	14	14	100	670 T	7250	03R014	2330	1680	4620	670 T	7250	2330	1680	4620
smallmouth bass	whole body	PCB043	14	14	100	57.2 T	993	03R014	400	366	826	57.2 T	993	400	366	826
smallmouth bass	whole body	PCB044 & 047 & 065	14	14	100	3600 JT	34500 J	03R014	15500	11500 J	29100 J	3600 JT	34500 J	15500	11500 J	29100 J

Table 4-15. Round 1 Summary Statistics of Chemical Concentrations in Smallmouth Bass Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
smallmouth bass	whole body	PCB045 & 051	14	14	100	265 JT	2550 J	03R014	1380	1170 J	2410 J	265 JT	2550 J	1380	1170 J	2410 J
smallmouth bass	whole body	PCB046	14	14	100	34.4 T	457	03R014	192	147 T	419	34.4 T	457	192	147 T	419
smallmouth bass	whole body	PCB048	14	14	100	347 T	4580	03R014	1720	1380 T	3800	347 T	4580	1720	1380 T	3800
smallmouth bass	whole body	PCB049 & 069	14	14	100	2540 JT	25600 J	03R014	10600	7870 J	16100 J	2540 JT	25600 J	10600	7870 J	16100 J
smallmouth bass	whole body	PCB050 & 053	14	14	100	230 JT	2060 J	03R014	1100	982 J	1700 J	230 JT	2060 J	1100	982 J	1700 J
smallmouth bass	whole body	PCB052	14	14	100	4120 T	41000	03R014	15600	11900 T	25700	4120 T	41000	15600	11900 T	25700
smallmouth bass	whole body	PCB054	14	14	100	27.3 T	381	07R009	154	119	329	27.3 T	381	154	119	329
smallmouth bass	whole body	PCB055	14	4	28.6	58.4	144	09R006	115	121	138	1.94 U	144	36	4.92 U	138
smallmouth bass	whole body	PCB056	14	14	100	615	6260	03R014	1770	1220	3430	615	6260	1770	1220	3430
smallmouth bass	whole body	PCB057	14	14	100	19.9	146	07R009	59.4	39	122	19.9	146	59.4	39	122
smallmouth bass	whole body	PCB058	14	11	78.6	13.2	575	09R006	168	60.9	488	5.88 U	575	133	24.6	488
smallmouth bass	whole body	PCB059 & 062 & 075	14	14	100	275 JT	2630 J	03R014	965	741 JT	1790 J	275 JT	2630 J	965	741 JT	1790 J
smallmouth bass	whole body	PCB060	14	14	100	1020 T	10400	03R014	3180	2150 T	5720	1020 T	10400	3180	2150 T	5720
smallmouth bass	whole body	PCB061 & 070 & 074 & 076	14	14	100	5650 J	50400 J	03R014	16400	11100 J	29200 J	5650 J	50400 J	16400	11100 J	29200 J
smallmouth bass	whole body	PCB063	14	14	100	282	2030	03R014	778	597 T	1440	282	2030	778	597 T	1440
smallmouth bass	whole body	PCB064	14	14	100	1370 T	16100	03R014	4770	3340	9110	1370 T	16100	4770	3340	9110
smallmouth bass	whole body	PCB066	14	14	100	5010	53200	03R014	15400	11000	24600	5010	53200	15400	11000	24600
smallmouth bass	whole body	PCB067	14	14	100	80.2 T	461	03R014	216	152	405	80.2 T	461	216	152	405
smallmouth bass	whole body	PCB068	14	14	100	65.1	364	07R009	139	127	222	65.1	364	139	127	222
smallmouth bass	whole body	PCB072	14	14	100	82.7 T	638	07R009	222	176	334	82.7 T	638	222	176	334
smallmouth bass	whole body	PCB073	14	4	28.6	37.1 T	251	08R010	123	85.1	117	0.613 U	251	38.6	6.32 U	117
smallmouth bass	whole body	PCB077	14	14	100	174 T	1270	03R014	414	270	781	174 T	1270	414	270	781
smallmouth bass	whole body	PCB078	14	5	35.7	9.72 T	637	03R014	139	17.4	20.2	1.96 U	637	52	4.22 U	20.2
smallmouth bass	whole body	PCB079	14	14	100	64.7	483	03R014	181	139	272	64.7	483	181	139	272
smallmouth bass	whole body	PCB080	14	0	0							1.83 U	7.39 U	5.43	6.06 U	6.2 U
smallmouth bass	whole body	PCB081	14	14	100	10.7	56.9	09R006	24.2	14.3	56.7	10.7	56.9	24.2	14.3	56.7
smallmouth bass	whole body	PCB082	14	14	100	492	3170	03R014	1160	789	2100	492	3170	1160	789	2100
smallmouth bass	whole body	PCB083 & 099	14	14	100	9640 JT	72200 J	08R010	25600	19700 J	40400 J	9640 JT	72200 J	25600	19700 J	40400 J
smallmouth bass	whole body	PCB084	14	14	100	1050	5410	03R014	2280	1940	3740	1050	5410	2280	1940	3740
smallmouth bass	whole body	PCB085 & 116 & 117	14	14	100	2710 JT	13100 J	03R014	5610	4660 J	9910 J	2710 JT	13100 J	5610	4660 J	9910 J
smallmouth bass	whole body	PCB086 & 087 & 097 & 108 & 119 & 125	14	14	100	6520 JT	29300 J	08R010	14000	9570 J	27500 J	6520 JT	29300 J	14000	9570 J	27500 J
smallmouth bass	whole body	PCB088 & 091	14	14	100	1480 JT	10700 J	08R010	3330	2320 J	5790 J	1480 JT	10700 J	3330	2320 J	5790 J
smallmouth bass	whole body	PCB089	14	14	100	35 T	412	03R014	113	77.4	213	35 T	412	113	77.4	213
smallmouth bass	whole body	PCB090 & 101 & 113	14	14	100	13100 JT	147000 J	08R010	39900	22300 J	100000 J	13100 JT	147000 J	39900	22300 J	100000 J
smallmouth bass	whole body	PCB092	14	14	100	2560 T	29700	08R010	7890	5310	15200	2560 T	29700	7890	5310	15200
smallmouth bass	whole body	PCB093 & 095 & 098 & 100 & 102	14	14	100	6180 JT	53500 J	08R010	16500	11500 J	33800 J	6180 JT	53500 J	16500	11500 J	33800 J
smallmouth bass	whole body	PCB094	14	14	100	37.3 T	469	08R010	114	78.3	190	37.3 T	469	114	78.3	190
smallmouth bass	whole body	PCB096	14	14	100	38 T	402	08R010	153	143	279	38 T	402	153	143	279
smallmouth bass	whole body	PCB103	14	14	100	207	4100	08R010	766	423	1630	207	4100	766	423	1630
smallmouth bass	whole body	PCB104	14	13	92.9	7.9	58.8	08R010	19.9	15.1	29.7	6.15 UT	58.8	19	15	29.7
smallmouth bass	whole body	PCB105	14	14	100	4460 T	20000	03R014	9750	8130	18500	4460 T	20000	9750	8130	18500
smallmouth bass	whole body	PCB106	14	0	0							1.43 U	13.4 U	8.77	9.71 U	11.2 U
smallmouth bass	whole body	PCB107 & 124	14	14	100	271 J	1160 J	04R023	561	464 J	1160 J	271 J	1160 J	561	464 J	1160 J
smallmouth bass	whole body	PCB109	14	14	100	1520 T	6070	08R010	2730	2060	4270	1520 T	6070	2730	2060	4270
smallmouth bass	whole body	PCB110 & 115	14	14	100	10700 JT	56900 J	08R010	23100	17400 JT	39200 J	10700 JT	56900 J	23100	17400 JT	39200 J
smallmouth bass	whole body	PCB111	14	14	100	26.2	299	08R010	71.4	43.3	174	26.2	299	71.4	43.3	174
smallmouth bass	whole body	PCB112	14	2	14.3	117	173	09R006	145	117	117	0.842 U	173	25.7	6.84 U	117

Table 4-15. Round 1 Summary Statistics of Chemical Concentrations in Smallmouth Bass Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
smallmouth bass	whole body	PCB114	14	14	100	339	1550	03R014	716	586	1240	339	1550	716	586	1240
smallmouth bass	whole body	PCB118	14	14	100	14000 T	60500	08R010	31300	23300 T	51800	14000 T	60500	31300	23300 T	51800
smallmouth bass	whole body	PCB120	14	14	100	114	1510	08R010	341	189	893	114	1510	341	189	893
smallmouth bass	whole body	PCB121	14	14	100	19 T	182	08R010	55.9	34.8	99.1	19 T	182	55.9	34.8	99.1
smallmouth bass	whole body	PCB122	14	14	100	54.9	230	03R014	106	81.8 T	199	54.9	230	106	81.8 T	199
smallmouth bass	whole body	PCB123	14	14	100	227	1090	03R014	455	388	839	227	1090	455	388	839
smallmouth bass	whole body	PCB126	14	14	100	40.8	103	03R014	65.9	55.1	101	40.8	103	65.9	55.1	101
smallmouth bass	whole body	PCB127	14	13	92.9	23.4 J	5370	09R006	642	50.4	2310	9.74 U	5370	597	47.6	2310
smallmouth bass	whole body	PCB128 & 166	14	14	100	3510 J	29300 J	08R010	8300	5000 J	18000 J	3510 J	29300 J	8300	5000 J	18000 J
smallmouth bass	whole body	PCB129 & 138 & 160 & 163	14	14	100	29400 J	516000 J	08R010	115000	50300 J	405000 J	29400 J	516000 J	115000	50300 J	405000 J
smallmouth bass	whole body	PCB130	14	14	100	1390	12600	08R010	3450	1680	11000	1390	12600	3450	1680	11000
smallmouth bass	whole body	PCB131	14	14	100	82.3	1050	08R010	275	136	941	82.3	1050	275	136	941
smallmouth bass	whole body	PCB132	14	14	100	2850	62200	08R010	11400	4520	38900	2850	62200	11400	4520	38900
smallmouth bass	whole body	PCB133	14	14	100	597	8430	08R010	2050	1160	6210	597	8430	2050	1160	6210
smallmouth bass	whole body	PCB134 & 143	14	13	92.9	616 J	11700 J	08R010	2290	885 J	8220 J	10.3 U	11700 J	2130	803 J	8220 J
smallmouth bass	whole body	PCB135 & 151 & 154	14	14	100	6730 J	159000 J	08R010	29400	12200 J	101000 J	6730 J	159000 J	29400	12200 J	101000 J
smallmouth bass	whole body	PCB136	14	14	100	1380 T	36000	08R010	6100	2100	21500	1380 T	36000	6100	2100	21500
smallmouth bass	whole body	PCB137	14	14	100	1360 T	3610	04R023	2190	1690	3560	1360 T	3610	2190	1690	3560
smallmouth bass	whole body	PCB139 & 140	14	14	100	449 JT	3840 J	08R010	1020	630 J	1670 J	449 JT	3840 J	1020	630 J	1670 J
smallmouth bass	whole body	PCB141	14	14	100	3960	91300	08R010	18100	7680	66300	3960	91300	18100	7680	66300
smallmouth bass	whole body	PCB142	14	0	0							1.34 U	34.1 U	8.79	6.02 UT	20.8 U
smallmouth bass	whole body	PCB144	14	14	100	758 T	18500	08R010	3530	1280	15500	758 T	18500	3530	1280	15500
smallmouth bass	whole body	PCB145	14	12	85.7	2.58	11.6	08R010	5.25	4.11	7.73	2.36 U	11.6	4.84	3.97 JT	7.73
smallmouth bass	whole body	PCB146	14	14	100	5570	94300	08R010	21800	10900	80400	5570	94300	21800	10900	80400
smallmouth bass	whole body	PCB147 & 149	14	14	100	9190 JT	188000 J	08R010	36000	15000 J	126000 J	9190 JT	188000 J	36000	15000 J	126000 J
smallmouth bass	whole body	PCB148	14	14	100	66.9	1210	08R010	239	125	502	66.9	1210	239	125	502
smallmouth bass	whole body	PCB150	14	14	100	26.2	723	08R010	116	52.9	271	26.2	723	116	52.9	271
smallmouth bass	whole body	PCB152	14	14	100	19.2 T	320	08R010	70.1	40.5	123	19.2 T	320	70.1	40.5	123
smallmouth bass	whole body	PCB153 & 168	14	14	100	34600 J	633000 J	08R010	142000	65400 J	538000 J	34600 J	633000 J	142000	65400 J	538000 J
smallmouth bass	whole body	PCB155	14	14	100	9.67	82.2	08R010	27.5	17.9	49.6	9.67	82.2	27.5	17.9	49.6
smallmouth bass	whole body	PCB156	14	14	100	2510 T	29200	08R010	7780	4400	25600	2510 T	29200	7780	4400	25600
smallmouth bass	whole body	PCB157	14	14	100	425 T	2000	08R010	863	638 T	1490	425 T	2000	863	638 T	1490
smallmouth bass	whole body	PCB158	14	14	100	2890	40000	08R010	9460	4670	33100	2890	40000	9460	4670	33100
smallmouth bass	whole body	PCB159	14	13	92.9	98.5 T	3370	08R010	605	182	2410	5.38 U	3370	562	168	2410
smallmouth bass	whole body	PCB161	14	0	0							0.905 U	23.2 U	7.52	6.67 U	14.1 U
smallmouth bass	whole body	PCB162	14	14	100	90.5	559	08R010	204	142	449	90.5	559	204	142	449
smallmouth bass	whole body	PCB164	14	14	100	1230	22300	08R010	4470	1830	15400	1230	22300	4470	1830	15400
smallmouth bass	whole body	PCB165	14	14	100	29.1	328	08R010	85.5	52.7	203	29.1	328	85.5	52.7	203
smallmouth bass	whole body	PCB167	14	14	100	1130	11800	08R010	3190	1640	11300	1130	11800	3190	1640	11300
smallmouth bass	whole body	PCB169	14	14	100	2.37	6.52	08R010	3.72	3.19	6.16	2.37	6.52	3.72	3.19	6.16
smallmouth bass	whole body	PCB170	14	14	100	6440	216000	08R010	40900	13500	162000	6440	216000	40900	13500	162000
smallmouth bass	whole body	PCB171 & 173	14	14	100	1780 J	66400 J	08R010	11900	3510 J	45600 J	1780 J	66400 J	11900	3510 J	45600 J
smallmouth bass	whole body	PCB172	14	14	100	1240	33400	08R010	6960	2710	29600	1240	33400	6960	2710	29600
smallmouth bass	whole body	PCB174	14	14	100	2280	98400	08R010	16100	4540	67200	2280	98400	16100	4540	67200
smallmouth bass	whole body	PCB175	14	14	100	221	7260	08R010	1430	502	6430	221	7260	1430	502	6430
smallmouth bass	whole body	PCB176	14	14	100	263 T	10500	08R010	1760	538	7810	263 T	10500	1760	538	7810
smallmouth bass	whole body	PCB177	14	14	100	2310	93700	08R010	17600	5590	86400	2310	93700	17600	5590	86400

Table 4-15. Round 1 Summary Statistics of Chemical Concentrations in Smallmouth Bass Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
smallmouth bass	whole body	PCB178	14	14	100	1570	38100	08R010	8050	3260	31700	1570	38100	8050	3260	31700
smallmouth bass	whole body	PCB179	14	14	100	1450	54100	08R010	8600	2260	32700	1450	54100	8600	2260	32700
smallmouth bass	whole body	PCB180 & 193	14	14	100	19400 J	536000 J	08R010	110000	44100 J	444000 J	19400 J	536000 J	110000	44100 J	444000 J
smallmouth bass	whole body	PCB181	14	14	100	66.4	994	08R010	249	145	761	66.4	994	249	145	761
smallmouth bass	whole body	PCB182	14	14	100	41.1	780	08R010	163	91.2	375	41.1	780	163	91.2	375
smallmouth bass	whole body	PCB183 & 185	14	14	100	5010 J	165000 J	08R010	30700	11300 J	121000 J	5010 J	165000 J	30700	11300 J	121000 J
smallmouth bass	whole body	PCB184	14	14	100	7.93	56.8	08R010	16.8	11.6	31.9	7.93	56.8	16.8	11.6	31.9
smallmouth bass	whole body	PCB186	14	0	0							0.48 U	4.13 U	3.46	4 U	4.13 U
smallmouth bass	whole body	PCB187	14	14	100	9990 T	252000	08R010	51700	21900	211000	9990 T	252000	51700	21900	211000
smallmouth bass	whole body	PCB188	14	14	100	18.3	304	08R010	68.8	36.8	182	18.3	304	68.8	36.8	182
smallmouth bass	whole body	PCB189	14	14	100	220	7020	08R010	1460	533	6620	220	7020	1460	533	6620
smallmouth bass	whole body	PCB190	14	14	100	1500	47900	08R010	9090	3260	34100	1500	47900	9090	3260	34100
smallmouth bass	whole body	PCB191	14	14	100	300	9190	08R010	1880	695	8080	300	9190	1880	695	8080
smallmouth bass	whole body	PCB192	14	0	0							0.52 U	3.73 U	3.13	3.61 U	3.73 U
smallmouth bass	whole body	PCB194	14	14	100	2220	74200	08R010	15200	5490	68000	2220	74200	15200	5490	68000
smallmouth bass	whole body	PCB195	14	14	100	847	37300	08R010	7110	2470	30300	847	37300	7110	2470	30300
smallmouth bass	whole body	PCB196	14	14	100	1450	44200	08R010	9190	3150	39600	1450	44200	9190	3150	39600
smallmouth bass	whole body	PCB197 & 200	14	14	100	218 J	7070 J	08R010	1350	471 J	5760 J	218 J	7070 J	1350	471 J	5760 J
smallmouth bass	whole body	PCB198 & 199	14	14	100	2820 JT	65600 J	08R010	14500	5680 J	62500 J	2820 JT	65600 J	14500	5680 J	62500 J
smallmouth bass	whole body	PCB201	14	14	100	298	7900	08R010	1670	636	7170	298	7900	1670	636	7170
smallmouth bass	whole body	PCB202	14	14	100	732	12000	08R010	2760	1350	9740	732	12000	2760	1350	9740
smallmouth bass	whole body	PCB203	14	14	100	2040	48700	08R010	9830	3940	33300	2040	48700	9830	3940	33300
smallmouth bass	whole body	PCB204	14	4	28.6	3.25	15.6	08R010	9.19	3.61	14.3	3.25	15.6	9.3	9.63 U	14.3
smallmouth bass	whole body	PCB205	14	14	100	105	4000	08R010	730	253	2850	105	4000	730	253	2850
smallmouth bass	whole body	PCB206	14	14	100	683 T	9890	08R010	2410	1410	6840	683 T	9890	2410	1410	6840
smallmouth bass	whole body	PCB207	14	14	100	105	1480	08R010	391	235	1280	105	1480	391	235	1280
smallmouth bass	whole body	PCB208	14	14	100	223 T	1870	08R010	625	393	1570	223 T	1870	625	393	1570
smallmouth bass	whole body	PCB209	14	14	100	180	825 T	06R024	380	355	551	180	825 T	380	355	551
		Dioxins/Furans (pg/g)														
smallmouth bass	whole body	Tetrachlorodibenzo-p-dioxin	14	14	100	0.393	1.67	07R009	0.76	0.702	1.09	0.393	1.67	0.76	0.702	1.09
smallmouth bass	whole body	Pentachlorodibenzo-p-dioxin	14	14	100	0.596	3.05	07R009	1.24	1.09	1.89	0.596	3.05	1.24	1.09	1.89
smallmouth bass	whole body	Hexachlorodibenzo-p-dioxin	14	14	100	0.558	6.85	07R009	2.29	1.5	4.69	0.558	6.85	2.29	1.5	4.69
smallmouth bass	whole body	Heptachlorodibenzo-p-dioxin	14	14	100	0.368	3.48	07R009	1.39	1.28	2.98	0.368	3.48	1.39	1.28	2.98
smallmouth bass	whole body	Octachlorodibenzo-p-dioxin	14	7	50	0.404	4.44	07R009	2.35	1.91	4.38	0.367 U	4.44	1.52	0.897 U	4.38
smallmouth bass	whole body	Tetrachlorodibenzofuran	14	14	100	0.693	9.24	07R009	3.68	2.56	7.26	0.693	9.24	3.68	2.56	7.26
smallmouth bass	whole body	Pentachlorodibenzofuran	14	14	100	1.3	21.4	07R009	6.17	3.09	19.5	1.3	21.4	6.17	3.09	19.5
smallmouth bass	whole body	Hexachlorodibenzofuran	14	14	100	0.317	7.79	07R009	2.34	1.28	5.8	0.317	7.79	2.34	1.28	5.8
smallmouth bass	whole body	Heptachlorodibenzofuran	14	13	92.9	0.107	1.41	07R009	0.584	0.426	1.23	0.016 U	1.41	0.543	0.39	1.23
smallmouth bass	whole body	Octachlorodibenzofuran	14	5	35.7	0.104	0.258	07R009	0.177	0.173	0.241	0.046 U	0.258	0.129	0.111	0.241
smallmouth bass	whole body	2,3,7,8-Tetrachlorodibenzo-p-dioxin	14	14	100	0.386	1.49	07R009	0.724	0.66	1.07	0.386	1.49	0.724	0.66	1.07
smallmouth bass	whole body	2,3,7,8-TCDD TEQ	14	14	100	9.37 T	38.1 T	08R010	19.7	17.1 T	29.9 T	9.37 T	38.1 T	19.7	17.1 T	29.9 T
smallmouth bass	whole body	1,2,3,7,8-Pentachlorodibenzo-p-dioxin	14	14	100	0.559	2.96	07R009	1.22	1.08	1.88	0.559	2.96	1.22	1.08	1.88
smallmouth bass	whole body	1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin	14	14	100	0.059	0.452	07R009	0.228	0.179	0.398	0.059	0.452	0.228	0.179	0.398
smallmouth bass	whole body	1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin	14	14	100	0.352	5.55	07R009	1.79	1.13	3.71	0.352	5.55	1.79	1.13	3.71
smallmouth bass	whole body	1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin	14	14	100	0.022 J	0.342	07R009	0.124	0.095	0.244	0.022 J	0.342	0.124	0.095	0.244
smallmouth bass	whole body	1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin	14	14	100	0.138	2.58	07R009	0.892	0.772	2.13	0.138	2.58	0.892	0.772	2.13
smallmouth bass	whole body	2,3,7,8-Tetrachlorodibenzofuran	14	14	100	0.497	8.2	07R009	3.12	2.04	6.78	0.497	8.2	3.12	2.04	6.78

Table 4-15. Round 1 Summary Statistics of Chemical Concentrations in Smallmouth Bass Tissue.

Species	Tissue Type	Analyte	N	N Detected	% Detected	Detected Concentrations						Detected and Nondetected Concentrations				
						Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
smallmouth bass	whole body	1,2,3,7,8-Pentachlorodibenzofuran	14	14	100	0.147	3.31	07R009	1.03	0.587	3.2	0.147	3.31	1.03	0.587	3.2
smallmouth bass	whole body	2,3,4,7,8-Pentachlorodibenzofuran	14	14	100	0.772	13.5	07R009	2.87	1.41	5.55	0.772	13.5	2.87	1.41	5.55
smallmouth bass	whole body	1,2,3,4,7,8-Hexachlorodibenzofuran	14	14	100	0.053	1.84	07R009	0.636	0.34	1.74	0.053	1.84	0.636	0.34	1.74
smallmouth bass	whole body	1,2,3,6,7,8-Hexachlorodibenzofuran	14	14	100	0.027 J	0.668	07R009	0.206	0.115	0.531	0.027 J	0.668	0.206	0.115	0.531
smallmouth bass	whole body	1,2,3,7,8,9-Hexachlorodibenzofuran	14	3	21.4	0.018	0.022	07R009	0.02	0.02 J	0.02 J	0.011 U	0.022	0.0129	0.011 U	0.02 J
smallmouth bass	whole body	2,3,4,6,7,8-Hexachlorodibenzofuran	14	14	100	0.021	0.27	07R009	0.103	0.07	0.221	0.021	0.27	0.103	0.07	0.221
smallmouth bass	whole body	1,2,3,4,6,7,8-Heptachlorodibenzofuran	14	13	92.9	0.039 J	0.393	07R009	0.18	0.138	0.339	0.039 J	0.393	0.173	0.136	0.339
smallmouth bass	whole body	1,2,3,4,7,8,9-Heptachlorodibenzofuran	14	11	78.6	0.016	0.078	07R009	0.0306	0.023	0.058 J	0.016 U	0.078	0.0275	0.019 J	0.058 J

Notes:

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table 4-16. Round 1 Summary Statistics of Chemical Concentrations in Subyearling Chinook Salmon Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
		Conventionals (percent)														
chinook	whole body	Total solids	6	6	100	20.6	22.4	02R112	21.7	22	22.2	20.6	22.4	21.7	22	22.2
chinook	whole body	Lipids	6	6	100	2.2	3.6	03R125	2.9	3	3.3	2.2	3.6	2.9	3	3.3
		Metals (mg/kg)														
chinook	whole body	Aluminum	6	6	100	6.27 J	19.6	02R113	12.6	12.7	16.2	6.27 J	19.6	12.6	12.7	16.2
chinook	whole body	Antimony	6	0	0							0.001 U	0.001 U	0.001	0.001 U	0.001 U
chinook	whole body	Arsenic	6	6	100	0.13	0.25	03R125	0.188	0.19	0.2	0.13	0.25	0.188	0.19	0.2
chinook	whole body	Cadmium	6	6	100	0.011 J	0.027	02R102	0.0175	0.013	0.024	0.011 J	0.027	0.0175	0.013	0.024
chinook	whole body	Chromium	6	3	50	0.09 J	0.19	02R113	0.13	0.11	0.11	0.06 U	0.19	0.0983	0.07 U	0.11
chinook	whole body	Copper	6	6	100	1.09	2.15	02R102	1.5	1.28	1.84	1.09	2.15	1.5	1.28	1.84
chinook	whole body	Lead	6	3	50	0.01 J	0.015 J	02R102	0.013	0.014 J	0.014 J	0.006 UJ	0.015 J	0.0103	0.009 UJ	0.014 J
chinook	whole body	Manganese	6	6	100	1.4	1.81	03R118	1.62	1.51	1.81	1.4	1.81	1.62	1.51	1.81
chinook	whole body	Mercury	6	6	100	0.016	0.02	02R102	0.0178	0.017	0.019	0.016	0.02	0.0178	0.017	0.019
chinook	whole body	Nickel	6	6	100	0.209 J	0.492 J	02R102	0.32	0.242 J	0.439 J	0.209 J	0.492 J	0.32	0.242 J	0.439 J
chinook	whole body	Selenium	6	0	0							0.2 U	0.4 U	0.317	0.3 U	0.4 U
chinook	whole body	Silver	6	0	0							0.0012 U	0.0022 U	0.00168	0.0014 U	0.0021 U
chinook	whole body	Thallium	6	6	100	0.005	0.0105	02R112	0.0068	0.0057	0.0084	0.005	0.0105	0.0068	0.0057	0.0084
chinook	whole body	Zinc	6	6	100	29.6	33.3	02R113	31.4	31.1	33.3	29.6	33.3	31.4	31.1	33.3
		PCB Aroclors (ug/kg)														
chinook	whole body	Aroclor 1016	6	0	0							1.9 U	1.9 U	1.9	1.9 U	1.9 U
chinook	whole body	Aroclor 1242	6	0	0							1.9 UJ	1.9 U	1.9	1.9 U	1.9 U
chinook	whole body	Aroclor 1248	6	6	100	13 J	72 J	02R112	34.2	30	39	13 J	72 J	34.2	30	39
chinook	whole body	Aroclor 1254	6	0	0							23 UJ	78 UJ	42.2	37 U	47 U
chinook	whole body	Aroclor 1260	6	6	100	17 J	28 J	02R112	21.7	22	24	17 J	28 J	21.7	22	24
chinook	whole body	Aroclor 1262	6	0	0							1.9 UJ	1.9 U	1.9	1.9 U	1.9 U
chinook	whole body	Aroclor 1268	6	0	0							1.9 UJ	1.9 U	1.9	1.9 U	1.9 U
chinook	whole body	Aroclor 1221	6	0	0							1.9 U	1.9 U	1.9	1.9 U	1.9 U
chinook	whole body	Aroclor 1232	6	0	0							1.9 U	1.9 U	1.9	1.9 U	1.9 U
chinook	whole body	Total PCB Aroclors	6	6	100	30 JT	100 JT	02R112	55.8	54 T	61 T	30 JT	100 JT	55.8	54 T	61 T
		Organochlorine Pesticides (ug/kg)														
chinook	whole body	2,4'-DDD	6	0	0							1 U	1.4 U	1.12	1 U	1.3 UT
chinook	whole body	2,4'-DDE	6	0	0							1 U	1 U	1	1 UT	1 U
chinook	whole body	2,4'-DDT	6	5	83.3	1.7 NJ	9.2 JT	02R112	4.06	3.2 NJ	3.3 J	1.7 NJ	19 UT	6.55	3.2 NJ	9.2 JT
chinook	whole body	4,4'-DDD	6	6	100	4.2 J	8.1 J	04R126	5.73	5.2 JT	6.3 J	4.2 J	8.1 J	5.73	5.2 JT	6.3 J
chinook	whole body	4,4'-DDE	6	6	100	19 T	24	04R126	21.2	20	24 T	19 T	24	21.2	20	24 T
chinook	whole body	4,4'-DDT	6	4	66.7	4.4 N	7.6 J	03R125	6.45	6.4 J	7.4 J	4.4 N	19 UT	10.6	7.4 J	19 UT
chinook	whole body	Total of 3 isomers: pp-DDT,-DDD,-DDE	6	6	100	24.2 JT	39.5 JT	04R126	31.2	29.6 JT	34.9 JT	24.2 JT	39.5 JT	31.2	29.6 JT	34.9 JT
chinook	whole body	Aldrin	6	0	0							1 U	1 U	1	1 UT	1 U
chinook	whole body	alpha-Hexachlorocyclohexane	6	0	0							1 U	1 U	1	1 UT	1 U
chinook	whole body	beta-Hexachlorocyclohexane	6	0	0							1 U	1.2 UT	1.03	1 U	1 U
chinook	whole body	delta-Hexachlorocyclohexane	6	0	0							1 U	1 U	1	1 UT	1 U
chinook	whole body	gamma-Hexachlorocyclohexane	6	0	0							1 U	1 U	1	1 UT	1 U
chinook	whole body	cis-Chlordane	6	2	33.3	1.4 N	1.6 N	03R125	1.5	1.4 N	1.4 N	1 U	1.6 N	1.17	1 UT	1.4 N

Table 4-16. Round 1 Summary Statistics of Chemical Concentrations in Subyearling Chinook Salmon Tissue.

Species	Tissue Type	Analyte	N	N Detected	% Detected	Detected Concentrations						Detected and Nondetected Concentrations				
						Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
chinook	whole body	trans-Chlordane	6	3	50	2 NJ	2.9 NJ	04R126	2.6	2.9 NJ	2.9 NJ	1 U	2.9 NJ	1.8	1 UT	2.9 NJ
chinook	whole body	Oxychlordane	6	0	0							1 U	1 U	1	1 UT	1 U
chinook	whole body	cis-Nonachlor	6	0	0							2.1 U	3.5 U	2.92	2.9 U	3.5 UT
chinook	whole body	trans-Nonachlor	6	4	66.7	1.6 NJ	3.3 NJ	04R126	2.68	2.5 NJ	3.3 NJ	1.6 NJ	19 UT	8.12	3.3 NJ	19 UT
chinook	whole body	Dieldrin	6	2	33.3	2.1 N	2.6 N	03R125	2.35	2.1 N	2.1 N	1.5 U	2.7 U	2.22	2.1 N	2.7 UT
chinook	whole body	alpha-Endosulfan	6	0	0							1 U	1.1 U	1.02	1 UT	1 U
chinook	whole body	beta-Endosulfan	6	4	66.7	2.4 N	4.3 N	02R102	3.28	3.1 NJ	3.3 N	1.3 UT	19 UT	5.57	3.1 NJ	4.3 N
chinook	whole body	Endosulfan sulfate	6	0	0							1 U	1 U	1	1 UT	1 U
chinook	whole body	Endrin	6	0	0							1 U	1 U	1	1 UT	1 U
chinook	whole body	Endrin aldehyde	6	0	0							1 UJ	1 UJ	1	1 UJT	1 UJ
chinook	whole body	Endrin ketone	6	0	0							1 U	1 U	1	1 UT	1 U
chinook	whole body	Heptachlor	6	0	0							1 U	1 U	1	1 UT	1 U
chinook	whole body	Heptachlor epoxide	6	0	0							1 U	1 U	1	1 UT	1 U
chinook	whole body	Methoxychlor	6	0	0							1 U	19 U	7.03	1 U	19 U
chinook	whole body	Mirex	6	0	0							1 U	1 U	1	1 UT	1 U
chinook	whole body	Toxaphene	6	0	0							61 UT	140 UT	98	95 U	120 U
		Semivolatile Organic Compounds (ug/kg)														
chinook	whole body	1,2,4-Trichlorobenzene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	1,2-Dichlorobenzene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	1,2-Diphenylhydrazine	6	0	0							31 U	33 U	32.3	32 U	33 U
chinook	whole body	1,3-Dichlorobenzene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	1,4-Dichlorobenzene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Azobenzene	6	0	0							160 UT	170 U	162	160 U	160 U
chinook	whole body	Bis(2-chloro-1-methylethyl) ether	6	0	0							160 UT	170 U	162	160 U	160 U
chinook	whole body	2,4-Dinitrotoluene	6	0	0							32 UT	85 UT	59.2	63 UT	72 UT
chinook	whole body	2,6-Dinitrotoluene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	2-Chloronaphthalene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	2-Nitroaniline	6	0	0							790 UT	830 U	805	790 UT	820 U
chinook	whole body	3,3'-Dichlorobenzidine	6	0	0							1600 UT	1700 U	1620	1600 U	1600 U
chinook	whole body	3-Nitroaniline	6	0	0							790 UT	830 U	805	790 UT	820 U
chinook	whole body	4-Bromophenyl phenyl ether	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	4-Chloroaniline	6	0	0							160 UT	170 UT	162	160 UT	160 UT
chinook	whole body	4-Chlorophenyl phenyl ether	6	0	0							79 UT	83 UT	80.5	79 UT	82 UT
chinook	whole body	4-Nitroaniline	6	0	0							790 UT	830 U	805	790 UT	820 U
chinook	whole body	Benzyl alcohol	6	0	0							310 UT	330 U	323	320 U	330 U
chinook	whole body	Bis(2-chloroethoxy) methane	6	0	0							160 UT	170 U	162	160 U	160 U
chinook	whole body	Bis(2-chloroethyl) ether	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Carbazole	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Dibenzofuran	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Hexachlorobenzene	6	0	0							1 UT	33 UT	14.3	1 UT	31 UT
chinook	whole body	Hexachlorobutadiene	6	0	0							1 UJT	1 UJT	1	1 UJT	1 UJT
chinook	whole body	Hexachlorocyclopentadiene	6	0	0							790 UT	830 U	805	790 UT	820 U
chinook	whole body	Hexachloroethane	6	0	0							1 UJT	1 UJT	1	1 UJT	1 UJT

Table 4-16. Round 1 Summary Statistics of Chemical Concentrations in Subyearling Chinook Salmon Tissue.

				N	%	Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	Detected	Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
chinook	whole body	Nitrobenzene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	N-Nitrosodimethylamine	6	0	0							160 UJT	170 UJT	163	160 UJT	170 UT
chinook	whole body	N-Nitrosodipropylamine	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	N-Nitrosodiphenylamine	6	0	0							160 UT	170 U	162	160 U	160 U
		Phenols (ug/kg)														
chinook	whole body	2,4,5-Trichlorophenol	6	0	0							790 UT	830 U	805	790 UT	820 U
chinook	whole body	2,4,6-Trichlorophenol	6	0	0							31 UT	51 UT	35.5	33 UT	33 UT
chinook	whole body	2,4-Dichlorophenol	6	0	0							31 UT	41 UT	33.8	33 UT	33 UT
chinook	whole body	2,4-Dimethylphenol	6	0	0							470 UT	500 U	482	470 UT	490 U
chinook	whole body	2,4-Dinitrophenol	6	0	0							3100 U	3300 U	3230	3200 U	3300 U
chinook	whole body	2-Chlorophenol	6	0	0							31 UT	44 UT	34.3	33 UT	33 UT
chinook	whole body	2-Methylphenol	6	0	0							160 UT	170 U	162	160 U	160 U
chinook	whole body	4,6-Dinitro-2-methylphenol	6	0	0							3100 UT	3300 U	3230	3200 U	3300 U
chinook	whole body	4-Chloro-3-methylphenol	6	0	0							310 UT	330 U	323	320 U	330 U
chinook	whole body	4-Methylphenol	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	4-Nitrophenol	6	0	0							1600 UT	1700 U	1620	1600 U	1600 U
chinook	whole body	Pentachlorophenol	6	0	0							160 UT	170 UT	162	160 UT	160 UT
chinook	whole body	Phenol	6	0	0							310 UT	330 U	323	320 U	330 U
chinook	whole body	2,3,4,5-Tetrachlorophenol	6	0	0							1600 UT	1700 U	1620	1600 U	1600 U
chinook	whole body	2,3,5,6-Tetrachlorophenol	6	0	0							1600 UT	1700 U	1620	1600 U	1600 U
		Phthalates (ug/kg)														
chinook	whole body	Dimethyl phthalate	6	0	0							160 UT	170 U	162	160 U	160 U
chinook	whole body	Diethyl phthalate	6	0	0							160 UT	1300 U	388	160 UT	310 U
chinook	whole body	Dibutyl phthalate	6	0	0							330 UT	520 U	447	490 U	510 U
chinook	whole body	Butylbenzyl phthalate	6	0	0							330 UJT	3700 U	2140	2300 U	3600 U
chinook	whole body	Di-n-octyl phthalate	6	0	0							320 U	560 U	438	330 UT	550 U
chinook	whole body	Bis(2-ethylhexyl) phthalate	6	0	0							95 UT	860 UT	301	98 UT	490 UT
		PAHs (ug/kg)														
chinook	whole body	2-Methylnaphthalene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Acenaphthene	6	0	0							32 UT	41 UT	35	33 UT	38 UT
chinook	whole body	Acenaphthylene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Anthracene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Fluorene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Naphthalene	6	1	16.7	33 T	33 T	02R113	33	33 T	33 T	31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Phenanthrene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Low Molecular Weight PAH	6	1	16.7	33 T	33 T	02R113	33	33 T	33 T	32 UT	41 UT	35	33 UT	38 UT
chinook	whole body	Dibenz(a,h)anthracene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Benz(a)anthracene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Benzo(a)pyrene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Benzo(b)fluoranthene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Benzo(g,h,i)perylene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Benzo(k)fluoranthene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Chrysene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT

Table 4-16. Round 1 Summary Statistics of Chemical Concentrations in Subyearling Chinook Salmon Tissue.

						Detected Concentrations						Detected and Nondetected Concentrations				
Species	Tissue Type	Analyte	N	N Detected	% Detected	Minimum	Maximum	Location	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th UCL
chinook	whole body	Fluoranthene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Indeno(1,2,3-cd)pyrene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Pyrene	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	High Molecular Weight PAH	6	0	0							31 UT	33 UT	32.3	32 UT	33 UT
chinook	whole body	Polycyclic Aromatic Hydrocarbons	6	1	16.7	33 T	33 T	02R113	33	33 T	33 T	32 UT	41 UT	35	33 UT	38 UT

Notes:

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table 4-17. Whole-Body Tissue Chemistry Summary for Selected Indicator Chemicals in the ISA - Detected and Non-detected Concentrations.

Analyte	Brown Bullhead	Black Crappie	Carp	Clam	Crayfish	Juvenile Chinook	Largescale Sucker	Northern Pikeminnow	Peamouth	Sculpin	Smallmouth Bass
Conventionals (percent)											
Lipids											
n	9	4	6	3	27	7	6	6	4	26	20
Frequency of Detection	100	100	100	100	100	100	100	100	100	100	100
Minimum Value	1.5 T	3.33 T	5.6 T	0.837 T	0.16	2.2	5.4 T	2.3 T	6.93 T	2.2	1.5 T
Maximum Value	3.8	7.5 T	13 T	1.7	1.3	3.6	8.7 T	8.1 T	10.7 T	6	7.2 T
Location of Maximum Value	FZ0609	FZ0609	FZ0609	07R003	08R001	03R125	03R014	03R014	05R006	03R001	04R023
Mean	2.4	5.26	7.9	1.179	0.78	2.87	7.6	5.3	8.93	4.2	5.4
Standard Deviation	0.6	2.06	2.6	0.459	0.27	0.53	1.3	2.0	1.81	1.0	1.5
METALS (mg/kg)											
Arsenic											
n	6	4	6	3	27	6	6	6	4	26	14
Frequency of Detection	100	100	100	100	100	100	100	100	100	100	100
Minimum Value	0.04 J	0.185 T	0.125 JT	0.802	0.25	0.13	0.18	0.19	0.35	0.13	0.17
Maximum Value	0.08 J	0.42	0.22	0.923	0.5 J	0.25	0.27	0.36 T	0.48	0.3	0.39
Location of Maximum Value	FZ0609	FZ0609	FZ0306	07R006	07R004	03R125	03R014, 05R006	03R014	08R010	03R032	03R014
Mean	0.056	0.279	0.166	0.856	0.35	0.188	0.233	0.26	0.425	0.205	0.264
Standard Deviation	0.014	0.104	0.040	0.062	0.06	0.04	0.034	0.079	0.06	0.046	0.064
Cadmium											
n	6	4	6	3	27	6	6	6	4	26	14
Frequency of Detection	100	100	100	100	100	100	100	100	100	100	71
Minimum Value	0.008 J	0.003 J	0.048	0.05	0.007 J	0.011 J	0.015 JT	0.007 J	0.021	0.003 J	0.002 U
Maximum Value	0.014	0.006 J	0.108	0.076	0.036 J	0.027	0.0325 JT	0.012 J	0.053	0.022	0.024 J
Location of Maximum Value	FZ0306	FZ0609	FZ0306	07R006	05R003	02R102	08R010	05R006	09R006	02R015	06R024
Mean	0.0116	0.004	0.069	0.060	0.018	0.018	0.021	0.010	0.032	0.009	0.006
Standard Deviation	0.003	0.001	0.021	0.014	0.007	0.007	0.007	0.002	0.014	0.005	0.006
Copper											
n	6	4	6	3	27	6	6	6	4	26	14
Frequency of Detection	100	100	100	100	100	100	100	100	100	100	100
Minimum Value	0.586	0.688	1.04	6.85	10.4	1.09	0.735	0.575 T	0.73	0.929	0.365
Maximum Value	0.798	0.946	1.42	8.36	17.6	2.15	1.1 T	0.89	1.61	1.68	1.29
Location of Maximum Value	FZ0609	FZ0306	FZ0306	07R006	07R004	02R102	08R010	09R006	03R014	06R001	09R006
Mean	0.69	0.82	1.16	7.717	14.1	1.502	0.901	0.661	1.21	1.246	0.652
Standard Deviation	0.090	0.134	0.16	0.78	2.14	0.419	0.119	0.124	0.40	0.186	0.279
Lead											
n	6	4	6	3	27	6	6	6	4	26	14
Frequency of Detection	83.3	25	100	100	100	50	100	100	100	96	100
Minimum Value	0.014 U	0.004 UJ	0.121 J	0.0707 T	0.041 J	0.006 UJ	0.064	0.005 UT	0.031	0.0149 J	0.0048 J
Maximum Value	0.0435 T	0.0185 JT	0.202 J	0.316	1.3 JT	0.015 J	0.191 T	0.016	10.6	0.96 J	0.303 J
Location of Maximum Value	FZ0609	FZ0306	FZ0609	07R006	04R002	02R102	08R010	07R009	03R014	04R002	08R010
Mean	0.0264	0.00863	0.151	0.153	0.147	0.010	0.122	0.010	2.697	0.144	0.042
Standard Deviation	0.010	0.007	0.030	0.141	0.236	0.004	0.052	0.004	5.27	0.207	0.083

Table 4-17. Whole-Body Tissue Chemistry Summary for Selected Indicator Chemicals in the ISA - Detected and Non-detected Concentrations.

Analyte	**Brown Bullhead**	**Black Crappie**	**Carp**	**Clam**	**Crayfish**	**Juvenile Chinook**	**Largescale Sucker**	**Northern Pikeminnow**	**Peamouth**	**Sculpin**	**Smallmouth Bass**
Mercury											
n	6	4	7	3	27	6	6	6	4	27	14
Frequency of Detection	100	100	100	100	100	100	100	100	100	100	100
Minimum Value	0.025 T	0.033	0.029	0.006 T	0.02	0.016	0.045	0.146 T	0.031	0.025	0.052
Maximum Value	0.054	0.044	0.047 T	0.012	0.041	0.02	0.085	0.494	0.054	0.086	0.114
Location of Maximum Value	FZ0306	FZ0609	FZ0609	06R002	06R001	02R102	07R009	07R009	09R006	07R003	04R023
Mean	0.0367	0.0394	0.041	0.010	0.028	0.018	0.068	0.280	0.038	0.042	0.083
Standard Deviation	0.010	0.006	0.006	0.003	0.006	0.001	0.016	0.145	0.01	0.015	0.020
Nickel											
n	6	4	6	3	27	6	6	6	4	26	14
Frequency of Detection	83.3	100	100	100	96	100	100	100	100	73	50
Minimum Value	0.213 J	0.33 JT	0.401 JT	0.16 T	0.18	0.209 J	0.29	0.119 J	0.27 J	0.08 U	0.02 U
Maximum Value	0.328 UJT	0.357 J	1.37 JT	0.211	0.83	0.492 J	0.81	0.461 J	0.482 J	0.398 J	0.2
Location of Maximum Value	FZ0609	FZ0609	FZ0306	07R006	07R006	02R102	09R006	07R009	03R014	07R003	04R023
Mean	0.275	0.343	0.745	0.185	0.39	0.32	0.463	0.259	0.386	0.247	0.086
Standard Deviation	0.050	0.012	0.343	0.026	0.14	0.118	0.195	0.121	0.10	0.102	0.056
Zinc											
n	6	4	6	3	27	6	6	6	4	26	14
Frequency of Detection	100	100	100	100	100	100	100	100	100	100	100
Minimum Value	12.7	14.2 T	87.1	21.4	13.7 J	29.6	17.1	16.4	23.1	13.6	13.4
Maximum Value	15.6	16.8	112	23.2 T	20.3 J	33.3	19.7 T	20	25.2	18	16.3
Location of Maximum Value	FZ0609	FZ0609	FZ0609	06R002	06R004	02R112, 02R113	09R006	08R010	08R010	04R002	03R014
Mean	14.1	15.4	99	22	17	31	18	18	24	15	15
Standard Deviation	1.1	1.08	11	0.99	1.8	1.66	0.914	1.47	0.99	1.3	0.9
TBT											
n	na	na	na	2	na	na	na	na	na	na	na
Frequency of Detection	na	na	na	100	na	na	na	na	na	na	na
Minimum Value	na	na	na	4.4	na	na	na	na	na	na	na
Maximum Value	na	na	na	7.6	na	na	na	na	na	na	na
Location of Maximum Value	na	na	na	06R002	na	na	na	na	na	na	na
Mean	na	na	na	6	na	na	na	na	na	na	na
Standard Deviation	na	na	na	2.26	na	na	na	na	na	na	na

Table 4-17. Whole-Body Tissue Chemistry Summary for Selected Indicator Chemicals in the ISA - Detected and Non-detected Concentrations.

Analyte	Brown Bullhead	Black Crappie	Carp	Clam	Crayfish	Juvenile Chinook	Largescale Sucker	Northern Pikeminnow	Peamouth	Sculpin	Smallmouth Bass
ORGANICS (ug/kg)											
Bis(2-ethylhexyl) phthalate											
n	6	na	6	3	27	6	6	na	na	26	14
Frequency of Detection	16.7	na	0	0	0	0	33	na	na	11.5	14
Minimum Value	98 UT	na	94 UT	120 UT	99 UJT	95 UT	78 UT	na	na	82 UT	86 UT
Maximum Value	2700 T	na	99 UT	340 UT	270 UJT	860 UT	3000 JT	na	na	28000 JT	87000 JT
Location of Maximum Value	FZ0306	na	FZ0306	07R006	07R006	04R126	08R010	na	na	08R003	04R023
Mean	533	na	96.7	210	128	301	692	na	na	1615	8748
Standard Deviation	1062	na	1.8	115	47	314	1166	na	na	5678	24058
Total HPAH											
n	6	na	6	3	27	6	6	na	na	26	14
Frequency of Detection	16.7	na	0	100	96	0	0	na	na	0	7.1
Minimum Value	33 UT	na	31 UT	84 T	17 UT	31 UT	26 UT	na	na	27 UT	25 UT
Maximum Value	49 UT	na	33 UT	268 JT	380 JT	33 UT	33 UT	na	na	33 UT	75 T
Location of Maximum Value	FZ0609	na	FZ0306, FZ0609	07R006	06R004	Several	03R014	na	na	Several	04R023
Mean	39	na	32.2	165	68	32	29	na	na	31	34
Standard Deviation	7.2	na	0.8	94	71.8	0.82	3.25	na	na	1.86	12
Total LPAH											
n	6	na	6	3	27	6	6	na	na	26	14
Frequency of Detection	16.7	na	83	0	96	17	33	na	na	38.5	50
Minimum Value	33 UT	na	32 UT	31 UT	33 UT	32 UT	26 UT	na	na	27 UT	30 UT
Maximum Value	60 T	na	222 JT	58 UT	97 T	41 UT	147 JT	na	na	132 T	308 T
Location of Maximum Value	FZ0306	na	FZ0609	07R003	06R004	02R102	07R009	na	na	06R004	07R009
Mean	37.5	na	77	42	58	35	51	na	na	40	76
Standard Deviation	11	na	77.71	14	22.7	3.6	48	na	na	23	91
Total PCB Aroclors											
n	6	4	6	3	27	6	6	6	4	26	14
Frequency of Detection	100	100	100	100	44	100	100	100	100	100	100
Minimum Value	67 T	85 T	230 T	62 JT	1.7 UT	30 JT	95 T	370 T	138 T	62 JT	90 JT
Maximum Value	1700 T	250 T	6500 JT	120 T	280 T	100 JT	2020 JT	1800 T	290 T	3360 T	4500 JT
Location of Maximum Value	FZ0609	FZ0609	FZ0306	07R006	03R005	02R112	03R014	07R009	09R006	02R015	08R010
Mean	404	134	1638	86	31	56	819	833	187	562	1113
Standard Deviation	641	78	2408	30	55.8	25	746	525	70	809	1244
2,3,7,8-TCDD TEQ (ng/kg)											
n	6	4	6	na	10	na	na	na	na	9	14
Frequency of Detection	100	100	100	na	100	na	na	na	na	100	100
Minimum Value	3.65 T	3.86	7.94 T	na	1.84 T	na	na	na	na	7.03 T	9.37 T
Maximum Value	18.9	6.52	49.9 T	na	23.8 T	na	na	na	na	54.1 T	38.1 T
Location of Maximum Value	FZ0609	FZ0609	FZ0306	na	07R006	na	na	na	na	07R006	08R010
Mean	8.6	4.31	18	na	5.01	na	na	na	na	21	20
Standard Deviation	5.44	1.28	15.8	na	6.7	na	na	na	na	17	7.6

Table 4-17. Whole-Body Tissue Chemistry Summary for Selected Indicator Chemicals in the ISA - Detected and Non-detected Concentrations.

Analyte	Brown Bullhead	Black Crappie	Carp	Clam	Crayfish	Juvenile Chinook	Largescale Sucker	Northern Pikeminnow	Peamouth	Sculpin	Smallmouth Bass
4,4'-DDD											
n	6	4	6	3	27	6	6	6	4	26	14
Frequency of Detection	100	100	100	100	19	100	100	83	100	73	100
Minimum Value	6.9 J	7.9 J	22.6 JT	2.2 N	1 UJ	4.2 J	20	6.1 UT	11.1 T	4 UT	11 JT
Maximum Value	13	18.5 JT	89.5 JT	160 T	17 NJ	8.1 J	150 T	48 T	29.5 T	305 T	110 T
Location of Maximum Value	FZ0609	FZ0609	FZ0306	07R006	07R006	04R126	08R010	05R006	09R006	07R006	07R009
Mean	9.38	12.1	46	64.1	2.1	5.7	54	33	23	27	38
Standard Deviation	2.53	4.51	24.5	84	3.4	1.4	49	17	7.94	64	25
4,4'-DDE											
n	6	4	6	3	27	6	6	6	4	26	14
Frequency of Detection	100	100	100	100	100	100	100	100	100	73	100
Minimum Value	29.5 JT	37 J	81 J	7.5 N	1.6 J	19 T	79	82	109 T	11 U	53 JT
Maximum Value	70	80.5 T	260 JT	94.5 T	51	24	185 T	545 T	185 T	630 T	220 T
Location of Maximum Value	FZ0306	FZ0609	FZ0306	07R006	07R006	04R126	08R010	07R009	09R006	07R006	04R023
Mean	47.4	55.6	135	42.7	6.3	21.2	121	252	132	59	132
Standard Deviation	15.8	21.7	65.5	46	9.3	2.3	42	162	36	126	46
4,4'-DDT											
n	6	4	6	3	27	6	6	6	4	26	14
Frequency of Detection	83.3	75	83	66	30	66	100	16	50	81	64
Minimum Value	5.3 J	6.3 UT	6.3 UT	8.3 U	1 UJ	4.4 N	6.3 UT	6.3 UT	6.3 UT	6.3 UT	6.3 UT
Maximum Value	46	15 J	24 J	75 T	14 J	19 UT	245 T	53 J	7 T	1700 T	130 T
Location of Maximum Value	FZ0609	FZ0609	FZ0306	07R006	07R003	02R112, 02R113	08R010	08R010	05R006	07R006	07R009
Mean	20.3	9.98	9	44.1	2.9	10.6	60	14	6.5	103	30
Standard Deviation	15.1	3.68	7.2	34	3.2	6.6	91	19	0.34	330	38
Total DDTs											
n	6	4	6	3	27	6	6	6	4	26	14
Frequency of Detection	100	100	100	100	100	100	100	100	100	100	100
Minimum Value	37.5 JT	54.5 JT	132 JT	9.7 T	1.6 JT	24.2 JT	126 T	145 T	127 JT	16 JT	65 JT
Maximum Value	117 T	99 JT	350 JT	330 T	78 JT	39.5 JT	580 T	588 T	215 T	2640 T	378 T
Location of Maximum Value	FZ0609	FZ0609	FZ0306	07R006	07R006	04R126	08R010	07R009	09R006	07R006	07R009
Mean	76	76.1	186	148.2	9.1	31	235	293	159	181	198
Standard Deviation	30.7	23	83.1	164	15.0	5.3	172	164	39	517	94
Dibenzofuran											
n	6	na	6	3	27	6	6	na	na	26	14
Frequency of Detection	0	na	0	0	0	0	0	na	na	3.7	14
Minimum Value	33 UT	na	31 UT	31 UT	17 UT	31 UT	26 UT	na	na	27 UT	25 UT
Maximum Value	33 UT	na	33 UT	33 UT	66 UT	33 UT	39 UT	na	na	33 T	52 T
Location of Maximum Value	All	na	FZ0306, FZ0609	06R002	03R004	Several	05R006	na	na	06R004	07R009
Mean	33	na	32	32	34	32	33	na	na	31	34
Standard Deviation	0	na	0.8	1	7.2	0.82	4.72	na	na	1.88	7.4

Table 4-17. Whole-Body Tissue Chemistry Summary for Selected Indicator Chemicals in the ISA - Detected and Non-detected Concentrations.

Analyte	Brown Bullhead	Black Crappie	Carp	Clam	Crayfish	Juvenile Chinook	Largescale Sucker	Northern Pikeminnow	Peamouth	Sculpin	Smallmouth Bass
4-Methylphenol											
n	6	na	6	3	27	6	6	na	na	26	14
Frequency of Detection	0	na	0	0	7	0	0	na	na	3.7	0
Minimum Value	33 UT	na	31 UT	31 UT	17 UT	31 UT	26 UT	na	na	27 UT	25 UT
Maximum Value	33 UT	na	33 UT	33 UT	190 T	33 UT	33 UT	na	na	62 T	33 UT
Location of Maximum Value	All	na	FZ0306, FZ0609	06R002	03R004	Several	03R014	na	na	02R015	07R009, 08R010
Mean	33	na	32	32	68	32	29	na	na	32	31
Standard Deviation	0	na	0.8	1	47.0	0.82	3.25	na	na	6.44	2.0

Notes:

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, and anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b)flouranthene, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

Table 4-18. Fillet Tissue Chemistry Summary for Selected Indicator Chemicals in the ISA - Detected and Non-detected Concentrations.

Analyte	Black Crappie	Brown Bullhead	Carp	Smallmouth Bass
Conventionals (percent)				
Lipids				
n	4	6	6	5
Frequency of Detection	100	100	100	100
Minimum Value	0.99	0.93	3.3	0.32
Maximum Value	1.8	1.3	8 T	1.1
Location of Maximum Value	FZ0306	FZ0306	FZ0306 T	05R006
Mean	1.40	1.08	4.6	0.82
Standard Deviation	0.37	0.15	1.7	0.30
METALS (mg/kg)				
Arsenic				
n	4	6	6	5
Frequency of Detection	100	100	100	100
Minimum Value	0.1 J	0.02 J	0.05 J	0.18
Maximum Value	0.18 T	0.02 J	0.16	0.28
Location of Maximum Value	FZ0609	All	FZ0306	03R014
Mean	0.14	0.02	0.10	0.21
Standard Deviation	0.03	0	0.04	0.04
Cadmium				
n	4	6	6	5
Frequency of Detection	50	83.3	100	40
Minimum Value	0.001 U	0.001 J	0.002 J	0.001 U
Maximum Value	0.001 J	0.001 J	0.009 J	0.001 J
Location of Maximum Value	All	All	FZ0609	06R024, 08R032
Mean	0.001	0.001	0.004	0.001
Standard Deviation	0	0	0.003	0
Copper				
n	4	6	6	5
Frequency of Detection	100	100	100	100
Minimum Value	0.166	0.203	0.313	0.187
Maximum Value	0.184 T	0.292	0.497	1.12
Location of Maximum Value	FZ0609, FZ0306	FZ0306	FZ0609	05R006
Mean	0.178	0.251	0.401	0.541
Standard Deviation	0.008	0.028	0.072	0.450
Lead				
n	4	6	6	5
Frequency of Detection	0	0	33	20
Minimum Value	0.001 U	0.002 U	0.004 U	0.002 U
Maximum Value	0.005 U	0.008 U	0.057	0.011
Location of Maximum Value	FZ306	FZ0609	FZ0609	05R006
Mean	0.00225	0.004	0.015	0.005
Standard Deviation	0.002	0.002	0.021	0.004

Table 4-18. Fillet Tissue Chemistry Summary for Selected Indicator Chemicals in the ISA - Detected and Non-detected Concentrations.

Analyte	Black Crappie	Brown Bullhead	Carp	Smallmouth Bass
Mercury -Without Skin				
n	4	6	6	5
Frequency of Detection	100	100	100	100
Minimum Value	0.067	0.035	0.074	0.071
Maximum Value	0.101	0.094	0.191 T	0.129 T
Location of Maximum Value	FZ0609	FZ0609	FZ0306	03R014
Mean	0.086	0.061	0.127	0.095
Standard Deviation	0.014	0.021	0.051	0.026
Nickel				
n	4	6	6	5
Frequency of Detection	50	100	83	100
Minimum Value	0.001 U	0.003 J	0.002 U	0.004 J
Maximum Value	0.064	0.055	0.087	0.224
Location of Maximum Value	FZ306	FZ0306	FZ0306	05R006
Mean	0.03075	0.021	0.037	0.073
Standard Deviation	0.034	0.019	0.031	0.099
Zinc				
n	4	6	6	5
Frequency of Detection	100	100	100	100
Minimum Value	7.45	3.96 J	17.4 J	8 J
Maximum Value	9.03	6.49 J	29.8 J	10.9 J
Location of Maximum Value	FZ306	FZ0306	FZ0306	05R006
Mean	8.23	5.23	23.3	9.11
Standard Deviation	0.75	0.84	4.3	1.16
ORGANICS (ug/kg)				
Bis(2-ethylhexyl) phthalate				
n	na	6	na	na
Frequency of Detection	na	16.7	na	na
Minimum Value	na	100 UT	na	na
Maximum Value	na	220 UT	na	na
Location of Maximum Value	na	FZ0609	na	na
Mean	na	120	na	na
Standard Deviation	na	49.0	na	na
Total HPAH				
n	na	6	na	na
Frequency of Detection	na	16.7	na	na
Minimum Value	na	33 UT	na	na
Maximum Value	na	110 UT	na	na
Location of Maximum Value	na	FZ0306	na	na
Mean	na	69	na	na
Standard Deviation	na	39.9	na	na
Total LPAH				
n	na	6	na	na
Frequency of Detection	na	33.3	na	na
Minimum Value	na	33 UT	na	na
Maximum Value	na	140 T	na	na
Location of Maximum Value	na	FZ0306	na	na
Mean	na	80	na	na
Standard Deviation	na	43.3	na	na

Table 4-18. Fillet Tissue Chemistry Summary for Selected Indicator Chemicals in the ISA - Detected and Non-detected Concentrations.

Analyte	Black Crappie	Brown Bullhead	Carp	Smallmouth Bass
Total PCB Aroclors				
n	4	6	6	5
Frequency of Detection	100	100	100	100
Minimum Value	19.6 T	37 T	350 T	39 T
Maximum Value	32 T	1300 JT	1200 JT	93 T
Location of Maximum Value	FZ0609	FZ0609	FZ0609	08R032
Mean	24.1	354	812	62
Standard Deviation	5.43	505	394	21.5
4,4'-DDD				
n	4	6	6	5
Frequency of Detection	100	66.7	100	100
Minimum Value	1.8 J	1.4 N	23 NJ	1.9 N
Maximum Value	2.7 J	6.1 UT	63.5 T	5
Location of Maximum Value	FZ0609	FZ0609	FZ0609	06R024
Mean	2.225	3.7	38	3.6
Standard Deviation	0.40	2.0	14.5	1.3
4,4'-DDE				
n	4	6	6	5
Frequency of Detection	100	100	100	100
Minimum Value	5.5	6.6 J	73 JT	12
Maximum Value	7.8	26.5 JT	135 JT	25
Location of Maximum Value	FZ0609	FZ0609	FZ0306	03R014
Mean	6.725	13.5	95	16.0
Standard Deviation	0.97	6.9	21.5	5.2
4,4'-DDT				
n	4	6	6	5
Frequency of Detection	100	66.7	100	100
Minimum Value	1.5 J	3.9 J	6.3 UT	5.6
Maximum Value	2.3 NJ	8.4 J	39 NJ	10
Location of Maximum Value	FZ0609	FZ0609	FZ0306	08R032
Mean	1.85	5.8	12	7.3
Standard Deviation	0.41	1.6	13.3	1.8
Total DDTs				
n	4	6	6	5
Frequency of Detection	100	100	100	100
Minimum Value	8.8 JT	12 JT	99.5 JT	21.1 JT
Maximum Value	12.6 JT	26.5 JT	173 JT	37.4 JT
Location of Maximum Value	FZ0609	FZ0609	FZ0306	03R014
Mean	10.8	19	139	26.9
Standard Deviation	1.61	5.3	25.6	6.5
Dibenzofuran				
n	na	6	na	na
Frequency of Detection	na	0	na	na
Minimum Value	na	33 UT	na	na
Maximum Value	na	80 UT	na	na
Location of Maximum Value	na	FZ0306	na	na
Mean	na	47	na	na
Standard Deviation	na	21.9	na	na

Table 4-18. Fillet Tissue Chemistry Summary for Selected Indicator Chemicals in the ISA - Detected and Non-detected Concentrations.

Analyte	Black Crappie	Brown Bullhead	Carp	Smallmouth Bass
4-Methylphenol				
n	na	6	na	na
Frequency of Detection	na	0	na	na
Minimum Value	na	33 UT	na	na
Maximum Value	na	33 UT	na	na
Location of Maximum Value	na	All	na	na
Mean	na	33	na	na
Standard Deviation	na	0	na	na

Notes:
na - not analyzed

The mean, median, and 95th upper confidence limit on the mean (UCL) were calculated using reported detection limit values for nondetects.

For summed total analyte concentration values (indicated with a "T" qualifier) for total PCB Aroclors, total LPAHs, total HPAHs, and total DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for nondetects on an individual sample basis.

Summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene.

Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene.

Where presented, PCB congeners are labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number.

Where presented, 2,3,7,8-TCDD TEQ values were calculated with World Health Organization 1997 TEFs for mammals.

J	Estimated value
JT	Combined qualifier
N	Analyte tentatively identified
NJ	Combined qualifier
NJT	Combined qualifier
NT	Combined qualifier
T	Result derived or selected from more than one reported value
U	Analyte was not detected
UJ	Combined qualifier
UJT	Combined qualifier
UT	Combined qualifier

LWG
LOWER WILLAMETTE GROUP

PORTLAND HARBOR RI/FS
ROUND 1 SITE CHARACTERIZATION SUMMARY REPORT

DRAFT

October 12, 2004

Submitted to:
Lower Willamette Group

Submitted by:
Integral Consulting, Inc.

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LIST OF ACRONYMS

ADCP	acoustic doppler current profiler
CAS	Columbia Analytical Services
COC	chemicals of concern
CRD	Columbia River datum
CSM	conceptual site model
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DEA	David Evans Associates
DEQ	Oregon Department of Environmental Quality
EDD	electronic data deliverable
EPA	U.S. Environmental Protection Agency
ERA	ecological risk assessment
FSP	field sampling plan
FL	fillet with skin and belly flap
FOD	frequency of detection
FS	skinless fillet
GC	gas chromatograph
GC/MS	gas chromatograph/mass spectrometer
HHRA	human health risk assessment
HPAH	high molecular weight polycyclic aromatic hydrocarbons
ICP-MS	inductively coupled plasma-mass spectrometry
ICP-OES	inductively coupled plasma-optical emission
ISA	initial study area
IUPAC	International Union of Pure and Applied Chemistry
LCS/LCSD	laboratory control sample/laboratory control sample duplicate
LDC	Laboratory Data Consultants, Inc.
LPAH	low molecular weight polycyclic aromatic hydrocarbons
LWG	Lower Willamette Group
LWR	lower Willamette River
MC	Multnomah channel
MDL	method detection limit
MRL	method reporting limit
MS/MSD	matrix spike/matrix spike duplicate
NOAA	National Oceanographic and Atmospheric Administration
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyls
QA	quality assurance
QAPP	quality assurance project plans
QC	quality control
RI/FS	remedial investigation/feasibility studies
RM	river mile
RPD	redox potential discontinuity

SEA	Striplin Environmental Associates. Inc.
SCRA	site characterization and risk assessment
SIM	selective ion monitoring
SOP	standard operating procedure
SVOC	semivolatile organic compound
TEQ	toxicity equivalent
TOC	total organic carbon
VOC	volatile organic compound

1.0 INTRODUCTION

This Round 1 Site Characterization Summary Report presents the data collected by the Lower Willamette Group (LWG) during the Round 1A and Round 1 field activities (hereafter referred to as Round 1) for the Portland Harbor remedial investigation and feasibility study (RI/FS). Field activities for these sampling rounds took place in the summer and fall of 2002, and other data collection activities occurred through June 2004 (i.e., sediment stake monitoring and bathymetric surveying). The Round 1 Field Sampling Report, detailing the Round 1 sample collection and handling procedures, was submitted previously to the U.S. Environmental Protection Agency (EPA) on March 14, 2003 (SEA et al. 2003).

The required content of this site characterization summary report is specified in the EPA-approved Portland Harbor RI/FS Programmatic Work Plan (Work Plan) (Table 6-1; Integral et al. 2004), where the purpose of the report is described as

> Provides validated sample analysis results in tabular format. Provides chemical concentration maps showing the distribution of sample analysis results for selected [chemicals of interest] COIs. Data validation reports and a summary of data validation results also will be included in each site characterization summary report. [Exposure point concentrations] EPCs for human health will be submitted as interim deliverables with site characterization summary reports.

This report summarizes the data collection activities and describes the laboratory analyses, data validation, and data management procedures used to generate the Round 1 physical [e.g., bathymetry, acoustic doppler current profiler (ADCP) surveys)], sediment and tissue chemistry, and biota (benthic infauna) data. All Round 1 sediment and tissue chemistry data are summarized in tables, and selected results are geographically depicted on maps.

This Round 1 Site Characterization Summary Report consists of four sections and six appendices. The remaining sections of this report include the following information:

Section 2: Data Collection Activities. Section 2 summarizes the main objectives and methodologies used in the physical system studies (bathymetry, sediment stakes, and ADCP surveys). Full descriptions of these surveys are provided under separate cover. This section also summarizes the objectives and methodologies used in the sediment and tissue sample collections; detailed sample acquisition information is provided in SEA et al. (2003a). Section 2 also notes deviations from the proposed and approved portions of the Round 1/1A sampling plans that occurred during Round 1.

Section 3: Sample Analyses and Data Management. Section 3 summarizes the physical system data analysis processes. This section also provides a detailed account of the sediment and tissue sample processing and laboratory analyses, highlighting deviations from the Round 1 QAPP. The benthic infauna data evaluation process is described. The chemical data validation and database management processes are also detailed, including the development of the Round 1 site characterization and risk assessment (SCRA) database from the main Round 1 database.

Section 4: Round 1 Results. This section summarizes the results of the physical system studies (bathymetric change data, sediment stake monitoring, and ADCP surveys), and presents the Round 1 sediment and tissue chemistry results.

Appendices: Appendix A is the previously submitted technical memorandum that presents the rules that were followed for the development of the Round 1 SCRA database from the Round 1 main database. Appendix B details the 2004 bathymetric change analysis that is summarized in the main report. Appendix C is the previously submitted Interim Deliverable for Human Health Risk Assessment: Round 1 Tissue Exposure Point Concentrations. Appendix D is the full SCRA database. Appendix E is a summary of the chemical data quality review and validation process. Finally, Appendix F is a crosstab file of SCRA data for the subset of indicator chemicals that are mapped in this report.

2.0 DATA COLLECTION ACTIVITIES

Round 1 data collection activities are summarized in the sections that follow. Detailed descriptions of the data collection methods associated with each type of data were included in the following documents, which were submitted to EPA under separate cover:

- Four multibeam bathymetry survey Reports (DEA 2002a; SEA 2003a; SEA and DEA 2003; Integral and DEA 2004)
- Three ADCP reports (DEA 2002b, 2003b, 2004)
- A sediment stake erosion/accretion monitoring report for July 2002 - January 2004 (Anchor 2003)
- A Round 1 field sampling report (SEA et al. 2003) that summarizes the Portland Harbor RI/FS Round 1 field sampling activities conducted from June 24 through December 20, 2002.

Figures 2-1a-b provide an overview of all station locations and sample types associated with the Round 1 fieldwork, with the exception of the bathymetry and ADCP surveys. These maps show the sediment stake locations, the beach and river surface sediment stations, the benthic infauna and multiplate stations, and the fish and invertebrate tissue sampling stations and zones.

2.1 PHYSICAL SYSTEM DATA COLLECTION

The goal of the physical system data collection activities is to obtain data on physical processes in the lower Willamette River (LWR), especially those related to sediment stability, erosion, and accretion. This information will also be used to support the hydrodynamic/sediment transport modeling being done as part of the RI/FS (West 2004). An overall understanding of physical processes in the river is needed to support the evaluation of risk (e.g., where are buried contaminated sediments likely to be re-exposed), and ultimately to develop and screen remedial alternatives.

Three physical system data types were collected or continued to be collected in Round 1:

- Four precision multibeam bathymetric surveys to document riverbed elevation changes over time (January 2002, September 2002, May 2003, February 2004).
- Time-series sediment stake measurements to document nearshore bank elevation changes (July 2002 – June 2004)
- Three ADCP surveys to provide flow measurements during specific hydrological conditions, including a high flow event in January/February 2004.

2.1.1 Bathymetry

Multibeam bathymetry surveys of the LWR from RM 0 (convergence with the Columbia River) to RM 15.6 (upstream end of Ross Island) were initiated in the winter of 2001 in accordance with the EPA-approved bathymetric survey work plan (DEA 2001). Bathymetric surveys were conducted by David Evans Associates, Inc. (DEA) in January 2002, September 2002, May 2003, and in February 2004 immediately following a relatively high-flow event (> 120,000 cfs) in the LWR. The methods used to conduct these surveys and process the data have been presented previously in the aforementioned documents provided to EPA.

2.1.2 Sediment Stakes

From July 2002 to June 2004, shoreline/beach sediment erosion/accretion rates were monitored periodically at eight facilities between river miles (RMs) 2 and 9 along the LWR. The sites included Portland General Electric (PGE), Terminal 4, Gasco, Willamette Cove, ATOFINA, GATX, Coast Guard, and Equilon (Figures 2-2a-c). No suitable location for the stakes was found at Schnitzer Steel, which was an additional proposed location. The study was initiated on July 17, 2002 and is fully described in a separate report (Anchor 2004). The PVC stakes were driven into the sediment at three different elevations along a transect perpendicular to the shoreline at each facility. Target elevations for the stake locations were the 10th percentile (low stake), the 50th percentile (median stake), and the 90th percentile (high stake) of the river stage measured at U.S. Geological Survey gage station #14211720.

The stakes were installed so that the top of each one was approximately 30 cm above the sediment surface. Monitoring of erosion/accretion at each location consisted of periodic measurements of the distance from the top of the stake to the existing sediment surface. Measurements were recorded each month during the first five months of the study (August through December 2002), in March, July, and October 2003, and in January and June 2004 when the investigation terminated.

2.1.2 ADCP Surveys

DEA conducted three single-day ADCP surveys in the LWR. The first survey was conducted on April 19, 2002 along 16 transects from RM 1 to 11 during a high-water event. On May 13, 2003, multiple ADCP profiles were collected along three transects in the vicinity of the Multnomah Channel (MC) (RM 3). In addition, a fourth transect was located in the MC. These ADCP transects were repeated 5-6 times over a 14-hour period in order to accumulate water flow data over a complete tidal cycle. On January 31, 2004, an ADCP survey was conducted during a relatively high-flow event along 17 transects in the LWR between RM 0 and 11. Detailed ADCP survey and data processing methods are described in DEA (2002b, 2003b, 2004).

2.2 SEDIMENT AND TISSUE SAMPLE COLLECTION

Sediment (river and beach sediments) and tissue samples were collected throughout the initial study area (ISA) during Round 1 to support the evaluation of the nature and extent of contaminants at the Site and the ecological and human health risk assessments (ERA and HHRA). The Round 1 field effort focused primarily on chemical concentrations in tissue and beach sediment samples. A limited number of river surface sediment samples were collected in Round 1, and most of these were samples collocated with tissue samples to support the ERA. The major river sediment nature and extent sampling effort is now being conducted as Round 2 (2004).

Except where noted in the Round 1 Field Sampling Report (SEA et al. 2003) or as modified by subsequent correspondence between the LWG and the EPA (e.g., EPA letter dated September 20, 2002), all sample collection activities followed the procedures described in the Round 1A and Round 1 field sampling plans (FSPs) (SEA et al. 2002a,b) and the EPA-approved Fish Tissue Sampling and Fish Tissue Compositing and Shipping Standard Operating Procedures (SOPs) (SEA et al. 2002a, 2002b).

Round 1 sediment and tissue collection activities included the following tasks:

- Collection of beach sediments in human use areas
- Collection of collocated surface sediments at sculpin, crayfish, and benthic infauna stations
- Collection of nearshore and in-channel sediments to supplement the distribution of collocated sediments
- Collection of benthic infauna at a subset of surface sediment chemistry stations and tissue sampling locations
- Collection of tissue from nine fish species, one crayfish, and one clam species for chemical analysis
- Reconnaissance survey for benthic tissue and lamprey ammocoete tissue.

Figures 2-1a-b show the distribution of Round 1 sampling stations for the collection of sediment and tissue samples.

The following sections briefly describe sampling methods used for the collection of the various sample types; detailed sample collection procedures are contained in SEA et al. (2003a).

2.2.2 Sediment Sampling

River Sediments

All surface sediments were collected using either a 0.1-m^2 van Veen grab sampler or a 0.3-m^2 hydraulic power grab sampler deployed from a sampling vessel equipped with a differential GPS navigation system to target and record the coordinates at each sampling location. A total of 26 surface sediment (0-15 cm) samples were collected at collocated tissue (sculpin, crayfish and clams) sampling locations to support the risk assessment. Surface sediments were also collected at 10 additional locations in the ISA collocated with benthic infauna collections (see Figures 2-1a-b). The collocated surface sediment samples were collected from October 16 through 25, 2002 with an additional sampling day on November 12, 2002.

Beach Sediments

To support the HHRA, composite surface beach sediment samples were collected at 20 beaches in the ISA (see Figures 2-1a-b). Beach sediment sampling occurred from October 9 through 14, 2002. Each beach was sub-divided into three transects parallel to the shoreline, as described in the FSP (SEA et al. 2002b). The river waterline was defined as the lower beach transect (transect 1). The vegetation line became the upper beach transect (transect 3), and halfway between these two transects was set as the mid-beach transect (transect 2). Field staff measured off a pre-determined, randomly-selected distance from the starting location where the first beach coordinates were recorded. A pre-determined, randomly-selected transect (1, 2, or 3) was then sampled at each pre-determined measured distance from the starting point.

Each beach was sampled using stainless-steel hand-corers at a minimum of three locations, depending on the total length of the beach. Sediment retained in the hand-corer was transferred into a foil-covered, stainless-steel bowl. Subsequent sampling of the beach proceeded in this manner until the preset number of randomly chosen locations (both along and up or down the beach) was sampled to form a composite.

2.2.2 Fish and Crayfish Sampling and Sampling Compositing

For the ecological risk and human health risk assessments, 10 fish species and one crayfish species were targeted for tissue analyses. The target species for the ERA were smallmouth bass, sculpin, subyearling chinook salmon, largescale sucker, peamouth, northern pikeminnow, Pacific lamprey ammocoetes, and crayfish. For the HHRA, the target species were carp, black crappie, bullhead, smallmouth bass, and crayfish. In addition, walleye and largescale sucker were collected as alternative species for bullhead and carp, respectively. However, they were not used for the HHRA since adequate numbers of bullhead and carp were collected.

This section briefly summarizes the fish collection methods used in Round 1. Complete field sampling details are provided in the Round 1 Field Sampling Report (SEA et al. 2003). During the collection of subyearling chinook salmon from June 24 through 27, 2002, beach seining and dip netting were the only fishing techniques used. During the collection of all remaining species from July 22 through November 10, 2002, six fishing techniques were used. These included beach seining, boat electrofishing, backpack electrofishing, trot line, angling, and crayfish traps.

In total, the LWG field teams collected fish in the ISA, both day and night, over portions of 79 days. A total of 1,870 fish were collected, including 863 sculpin, 419 crayfish, 128 largescale sucker, 90 smallmouth bass, 78 carp, 92 subyearling chinook salmon, 64 brown bullhead, 35 northern pikeminnow, 48 black crappie, 30 peamouth, 18 yellow bullhead, 3 lamprey ammocoetes, and 2 walleye.

Despite repeated backpack electrofishing and surface sediment grab sampling efforts by the LWG, EPA agency team, and tribal fisheries experts in the late summer/fall of 2002, only three lamprey ammocoetes were collected in the LWR. These efforts are detailed in SEA and Windward (2003). Due to insufficient lamprey tissue volume, no tissue chemical analyses were conducted on this species.

A field laboratory was established onsite to handle all fish collected during the Round 1 event. Fish samples were taken to the field laboratory, processed daily, and frozen. Fish specimen sample handling and processing procedures followed those detailed in EPA-approved project SOPs and the quality assurance project plan (QAPP). Fish were visually inspected and, depending on the species, filleted. Whole fish and fish fillets were individually wrapped and frozen prior to compositing. Following final agreement with EPA on the species-by-species compositing scheme, individual whole-body fish or fillets were pooled together, according to the compositing plan, in large plastic bags and labeled with the composite identification number. Frozen composite samples were then shipped frozen (on dry ice) to Axys Analytical Services Ltd. (Sidney, B.C., Canada) for tissue homogenization.

2.2.3 Macroinvertebrate Fauna and Tissue

Hester-Dendy samplers were used for quantitative sampling of the epibenthic macroinvertebrate community. These samplers are artificial substrates that are suspended above the bottom on retrievable moorings and are colonized by epibenthic macroinvertbrates. These samplers were used to characterize the composition of the epibenthic community utilizing hard-substrate habitats within the ISA. This information is being used to understand potential exposure pathways associated with riprap and other hard-bottom invertebrate communities (Integral et al. 2004)

Soft-bottom samples were collected from 22 stations in the ISA from October 22 through 25, 2002. Macroinvertebrate fauna were collected at 12 of the sculpin/crayfish collocated sediment stations and at 10 additional stations located in both nearshore areas and in the navigation channel. Surface sediment chemistry samples were also collected (see Figures 2-1a-b) at all benthic infauna stations. Most of the infauna samples were collected with a 0.1-m^2 van Veen grab sampler and sieved through a 0.5-mm sieve box. At two stations, the samples were collected by subsampling the 0.3-m^2 hydraulic power grab with 18-cm-diameter by 15-cm-length stainless steel cores. A single replicate was collected at each location to provide a qualitative indication of the macroinvertebrate assemblages in the ISA.

Prior to the infaunal community sampling, a benthic field reconnaissance was conducted in September 2002 to assess whether there was adequate benthic invertebrate tissue mass in near-surface sediments (0-15 cm depth) for chemical analysis. The results of this reconnaissance have been detailed in SEA and Windward (2003). Because the soft-bottom benthic community is dominated by very small organisms (e.g., midges and oligochaetes), the results of the reconnaissance concluded that it would not be possible to collect adequate invertebrate biomass from the soft-bottom habitats in the LWR.

2.2.4 Clam Sampling

Based on the juvenile lamprey/benthic infauna reconnaissance survey conducted in September 2002 (SEA and Windward 2003), it was determined that the non-native bivalve species, *Corbicula fluminea,* was the largest and most widespread benthic invertebrate in the ISA and potentially in sufficient abundance to provide invertebrate tissue samples for tissue body burden analyses. In October and November 2002, clam collection was attempted by repeated casts of a 0.1-m^2 van Veen grab sampler at five target locations [see Table 3-3 in the Round 1 Field Sampling Report (SEA et al. 2003)]. In addition, an unsuccessful attempt was made to rake clams from a shallow subtidal beach at Station 07R030. Clam collection was attempted over multiple sampling days at each proposed FSP location. After considerable total effort (over 500 van Veen casts), two locations near the center of the ISA yielded more than 150 grams of tissue, which was the minimum biomass required to conduct tissue analyses for a full suite of target analytes (see Figures 2-1a-b). Fifty-three grams were collected at a third station, while the remaining two stations yielded only nominal amounts [see Table 3-3 the Round 1 Field Sampling Report (SEA et al. 2003)]. Clam sampling occurred from October 29 through November 5, 2002, with an additional day on November 12, 2002.

2.3 SAMPLING COMPLETENESS

This section summarizes the deviations from the Round 1 and 1A FSPs (SEA et al. 2002a,b) that occurred during the Round 1 field sampling due to necessary modifications to sample station locations, sampling difficulties, or the inability to obtain the proposed samples at target locations and the substitution of alternative locations.

Section 3.2.3 of this report details changes made to the approved QAPP/SOP procedures during sample processing and chemical analyses of tissue or sediment samples.

2.3.1 Station Locations

During sampling, 18 sampling stations, predominantly sculpin and crayfish, were moved relative to the original target locations proposed in the Round 1 FSP. In each case, the field crew determined that relocation was warranted because the original location proved unsuitable for sampling. Stations were typically moved following several unsuccessful attempts to collect the target organisms at a given location. Small gradients in microhabitat conditions (e.g., submerged structures or riprap), substrate type (sand vs silt), and water depth all influenced the distribution of target organisms. Table 2-1 provides a complete list of the stations and the distance and direction moved. Additional details on station location modifications are provided in the Round 1 Field Sampling Report (SEA et al. 2003).

In addition to station location, 30 new stations were incorporated into the sampling effort either at the request of EPA and its partners or because the collection of specific samples warranted a new location. These added stations included beach sediment stations, subyearling chinook salmon stations, and offshore benthic taxonomy stations. EPA and its partners requested two new stations (02R015 and 03R032, respectively) for fish tissue and collocated sediment (see Table 2-1). Four new stations were created as alternative sites for the collection of sculpin and/or crayfish tissue samples (03R034, 05R020, 06R031, 07R006) because the originally proposed sampling station locations presented unsuitable habitats for the target species. Three fishing areas for smallmouth bass (04R023, 06R024, and 08R032) were added for the HHRA and ERA. Lastly, a new clam station with collocated sediment (07R030) was added in an effort to collect adequate invertebrate tissue in this area (clams had proved difficult to obtain at Station 07R003) (see Table 2-1). However, insufficient clam tissue was collected for chemical analyses at Station 07R030, and only surface sediment chemistry data are available from that station.

2.3.2 Lamprey Ammocoetes

Lamprey ammocoetes were eliminated from the sampling program after two reconnaissance surveys determined that the apparent low abundance of the larval fish at that time of year would yield insufficient quantities for laboratory tissue analyses (SEA and Windward 2003).

2.3.3 Benthic Invertebrate Tissue

Based on the benthic reconnaissance (SEA and Windward 2003), the only benthic infauna species of sufficient abundance and size for laboratory tissue analyses was the exotic bivalve, *Corbicula fluminea*. Clams were targeted at five stations, and adequate biomass for some tissue analyses was obtained at three stations.

2.3.4 Fish and Crayfish Tissue

Table 2-2 compares all composite samples collected during Round 1 with the proposed composite samples in the Fish Tissue Sampling SOP (SEA et al. 2002a). The same number of fish and crayfish samples was collected as proposed in the SOP, with the exception of black crappie and peamouth. The number of individual fish included in some of the smallmouth bass composite samples was less than the target of five fish.

2.3.5 Benthic Infauna

One replicate sample was collected at all target stations, with the exception of Station 05R040. At that location, sorting of benthic infauna in the sample was prevented due to liquefaction of tar-like substances contained in the sampled sediments that apparently reacted with preservatives in the sample container.

3.0 SAMPLE ANALYSES AND DATA MANAGEMENT

This section describes the methods used for processing the physical system data, the sample processing and analytical laboratory methods used to analyze the sediment and tissue samples, and methods used to process benthic macroinvertebrate samples. A subsection of the chemical analyses describes deviations from the QAPP. The data management subsection explains in detail how the data validation process occurred from the lab data package to a final validated electronic data deliverable (EDD). Furthermore, it describes how the SCRA database was compiled into a series of compatible Excel tables, which were then distributed to the SCRA data users. The LDC data validation reports are provided as an attachment to Appendix E.

3.1 PHYSICAL SYSTEM

The data processing methods associated with the physical system measurements, bathymetry and ADCP surveys, and sediment stake measurements are detailed in the individual reports for each of these data types (e.g., DEA 2004, Integral and DEA 2004, Anchor 2004). The following sections summarize the data evaluation process.

3.1.1 Bathymetry

Data from each of the four bathymetric surveys (January and September 2002, May 2003, and February 2004) were plotted as contour and hillshade digital terrain maps. The survey area extended from RM 0, the convergence with the Columbia, to RM 15.6, the upper end of Ross Island. In addition to the bathymetry maps, bathymetric change maps were generated by overlaying the results of the individual surveys. These temporal overlays compare surveys 1 and 2, 2 and 3, 3 and 4, and all surveys against survey 1.

The bathymetric change maps were examined to evaluate the distribution and magnitude of riverbed elevation changes that have occurred over the period of observation. In these analyses, the surveyed area is divided into two main zones: channel and nearshore. The division between the two is delineated by the -15 foot North American Vertical Datum of 1988 (NAVD88), which corresponds approximately to the -20 foot Columbia River Datum (CRD) contour in the study area (Integral et al. 2004). The comparison of the first (T1; January 2002) and second (T2; September 2002) surveys has been presented previously in the draft Round 2A FSP (SEA et al. 2003). Comparison of the third survey (T3, May 2003) and the previous two surveys is presented in Integral et al 2004. The results of this evaluation supported the selection of a 30 cm (~ 1 ft) surface sediment sampling interval for the Round 2 river surface sediment sampling program. This Round 1 report expands this bathymetry change analysis to include the February 2004 survey, which captured the effects of a relatively high-flow event that occurred in late January/early February 2004. The results of this most recent bathymetric change data evaluation are summarized in Section 4 of this report.

3.1.2 Sediment Stake Measurements

The magnitude of erosion or accretion at the sediment stake locations was assessed by calculating the differences between the heights of each stake above the sediment surface for each monitoring event (Anchor 2003). Net erosion/accretion over the period of study was derived by comparing the subsequent measurements to the initial stake height (Anchor 2003).

3.1.3 ADCP Data Processing

DEA used WinRiver software to process the ADCP survey data. For each cross-sectional transect surveyed, plots displaying velocity magnitude (expressed in feet/second) and velocity direction (expressed as degrees from magnetic north) were created. In addition, a graph depicting the transect path with depth averaged current vectors was generated (see Section 4.1.3 for detailed explanation).

River discharge values (Q) along each transect were also calculated. Discharge is a representation of a volume of water moving past a position per unit of time (in this case expressed in units of feet^3/second). In order for a discharge determination to be made, the cross-sectional area of the river along an ADCP transect must be determined. DEA measured the distance from bank-to-bank along each ADCP transect in AutoCAD. Bathymetric data showing the topography of the river-bottom are available throughout the study area from the precision bathymetric survey data sets.

3.2 SEDIMENT AND TISSUE CHEMISTRY

This section provides an overview of the laboratory sample processing and analytical chemistry procedures used in Round 1. In addition, each subsection notes any deviations from the proposed Round 1/1A SOPs (SEA 2002a, SEA et al. 2002a,b) and Round 1 QAPP (SEA 2002b).

3.2.1 Sample Processing

3.2.1.1 Sediment Sample Processing Procedures

A detailed description of sediment sample handling and processing between the field collection and the analytical laboratory is included in the Round 1 Field Sampling Report (SEA et al. 2003). A brief summary is provided here.

At the end of each field day, the field crew transported all samples to the LWG field laboratory at the ATOFINA facility in Portland, OR. There, samples that could be frozen were transferred to a chest freezer. Those samples that could not be frozen (grain size, volatile organics) were held on ice for up to 4 days. The samples were then placed in coolers and driven by SEA staff to the SEA office in Olympia, WA. Upon arrival at SEA's office, the frozen sample jars were immediately transferred into a chest freezer, and the grain-size and volatile organic sample jars were transferred into refrigerators. Once all samples were checked for correct labeling and sorted by analyte groups, SEA staff then wrapped all sample jars in bubble-wrap and placed them with either blue ice or dry ice in coolers for shipment to the analytical laboratories. The chain-of-custody was then completed at SEA's office and followed all requirements outlined in the QAPP (SEA 2002b). Samples were shipped to ARI for conventionals, metals, butyltins, PCB Aroclors, pesticides, herbicides, semivolatile organic compounds (SVOCs) and volatile organic compounds (VOCs) analyses, and to Axys for dioxins/furans and PCB congener analyses.

3.2.1.2 Tissue Sample Processing Procedures

Fish tissue sample processing, including compositing, homogenization, and shipping, followed the procedures detailed in the Fish Tissue Homogenization and Compositing SOPs (SEA 2002a, SEA et al. 2002a). Laboratory analyses followed the QAPP (SEA 2002b). A detailed description of all tissue sample handling and processing in the field and field laboratory can be found in the Round 1 Field Sampling Report (SEA et al. 2003). A brief summary is provided here.

After all fish and crayfish were measured for length and weight, and certain fish filleted. Processed samples were stored in freezers at the LWG field laboratory at ATOFINA. Once the Agency Team concurred that samples were to be combined into composites for analysis, the field laboratory personnel sorted the individual samples necessary to assemble each composite and placed the individual samples inside a resealable plastic bag, which contained a new label reflecting the composite code. Fish tissue sample composite information is presented in Figures 4-21 to 4-28.

Composites of large fish consisted of five whole fish, if a sufficient number of individual fish were collected at a given sampling location. If a fish was filleted, the scales were removed prior to filleting for fish with scales (SEA et al. 2002a). Subsequently, the skin was removed from one fillet (FS) and the other preserved with its skin (FL). Each fillet composite was composed of five fillets with skin or five skinless fillets. For crayfish and small fish, such as sculpin and subyearling chinook salmon, the composites were assembled by weight (> 150g per composite) rather than by numbers of individual samples. All fish composites were wrapped and placed into coolers with dry ice according to the protocols of the Fish Tissue Compositing and Shipping SOP (SEA et al 2002d). The chain-of-custody was then completed by a member of the field crew and followed all requirements outlined in the QAPP (SEA 2002b).

Fish without scales (i.e., brown bullhead) were to be skinned prior to filleting in accordance with the Fish Tissue Compositing and Shipping SOP (SEA et al 2002d). As stated in the Round 1 Field Sampling Report (SEA et al. 2003), prior to September 5, 2002, brown bullhead fish were skinned after filleting and only one side of this scaleless fish was skinned for the "skin off without belly flap" tissue sample (labeled as FS). Because the entire fish was not skinned prior to filleting, the fillet samples with the belly flap included (labeled as FL), which were processed prior to September 5, 2002 (5 samples in total), had the skin left on. After September 5, 2002, brown bullhead fish were processed consistent with the SOP and EPA guidance such that the entire fish was skinned prior to filleting. The FL samples processed after September 5, 2002, were skinless, but included the belly flap, while the FS samples were skinless without the belly flap. Consequently, three tissue composites from the RM 3 to 6 fishing-zone were homogenized containing four skinless fillets and one fillet with skin each (composites: LWG01FZ0306TSBBFLC10, LWG01FZ0306TSBBFLC20, and LWG01FZ0306TSBBFLC30). Two other skinless, brown bullhead fillet composites from the RM 6 to 9 fishing-zone contained one fillet with skin each. However, the skin from these fillets was removed at Axys prior to homogenization (composites: LWG01FZ0609TSBBFLC10 and LWG01FZ0609TSBBFLC20).

Following a shipping delay by FedEx and the resultant thawing and loss of the first tissue samples sent from Axys (Sidney, B.C.) to ARI (Tukwila, WA), all subsequent fish composites samples were driven from the field laboratory at ATOFINA directly to ARI. At ARI, the chemicals of concern (COCs) were relinquished to an Axys laboratory representative, who then carried the coolers across the border into Canada. The entire trip was done in one day. Once the fish composites were homogenized, Axys retained an aliquot of that sample for dioxin/furans and PCB congeners analyses. Two separate tissue composite aliquots were then driven to Columbia Analytical Services (CAS) (Kelso, WA) for conventionals, metals, butyltins, PCB Aroclors, and pesticides analyses, and to ARI for SVOC analyses.

3.2.2 Sample Analyses

Surface sediment and tissue samples were collected and analyzed for organic, inorganic, and physical and conventional parameters according to the sample preparation and analytical procedures in the QAPP (SEA 2002b). A summary of samples collected at each station and the chemical analyses conducted for each Round 1 sample is included in Table 3-1.

3.2.2.1 Sediment Chemical Analyses

The laboratory methods of analysis for the sediment samples are included in Table 3-2. All sediment samples were analyzed for metals, organochlorine pesticides, PCB Aroclors, chlorinated herbicides, SVOCs, total organic carbon (TOC), grain size, and total solids. As required by the FSP, selected sediment samples were analyzed for PCB congeners, polychlorinated dibenzo-p-dioxins and furans (PCDD/Fs), butyltins, and VOCs. The sediment analyses were conducted by ARI, Axys, and Rosa Environmental & Geotechnical Laboratory (REGL), Seattle, WA (subsequently acquired by ARI).

3.2.2.2 Tissue Chemical Analyses

Tissue samples were resected at the field laboratory and were composited and homogenized by Axys. The samples were analyzed for organic, inorganic, and conventional parameters according to the methods listed in Table 3-3. Axys retained an aliquot of homogenized tissue for analyses of dioxin/furans and PCB congeners on whole-body samples for HHRA species only. Aliquots of the homogenized tissue samples were sent to ARI and CAS, for chemical analysis. All tissue samples were analyzed for organochlorine pesticides, PCB Aroclors, metals, lipids, and total solids, as specified in the FSP. Selected tissue samples were analyzed for SVOCs, PCB congeners, PCDD/Fs, and butyltins. Axys, ARI, and CAS all performed chemical analyses for the tissue samples, as indicated on Table 3-3.

3.2.3 Deviations from the QAPP

The sections below describe deviations from the QAPP (SEA 2002b) for the chemical analyses of tissue and sediment matrices.

3.2.3.1 Conventional Parameters

There were no deviations from the analytical methods listed in the QAPP for laboratory analyses conducted for conventional parameters.

3.2.3.2 Metals

The QAPP provided analytical methods for the analysis of 12 metals in sediment samples and 14 metals in tissue samples. A comparison of the methods specified in the QAPP to the methods used for metals analysis in Round 1 samples is provided in Table 3-4. With few exceptions, metals analyses in sediment and tissue samples were implemented as specified in the QAPP. The only deviations from the methods specified in the QAPP were for aluminum, manganese, and zinc, where several samples, depending on the analyte, were analyzed by inductively coupled plasma-optical emission -optical emission (ICP-OES; EPA Method 6010B) and inductively coupled plasma-mass spectrometry (ICP-MS; EPA Method 6020), and several samples were analyzed by ICP-OES, instead of ICP-MS, as specified in the QAPP. Because the aluminum, manganese, and zinc concentrations reported by ICP-OES were elevated above the laboratory method detection limits, this deviation is not significant and does not impact the usability of the affected results.

3.2.3.3 Volatile Organic Compounds

There were no deviations from the analytical methods included in the QAPP for the laboratory analysis for VOCs in sediment.

3.2.3.4 Semivolatile Organic Compounds

For selected compounds, SVOCs analysis by EPA Method 8270C full-scan and selective ion monitoring (SIM) was conducted during Round 1. The following deviations from the methods specified in the QAPP occurred for this analysis:

- The QAPP specified initial calibration of the gas chromatograph/mass spectrometer (GC/MS) with a 7-point calibration curve, of which at least one of the low standards is at the concentration of the method reporting limit (MRL). ARI analyzed the sediment and tissue samples for SVOCs and followed their internal SOP, which specified a 6-point calibration curved with a seventh point as a MRL check, instead of as a calibration standard. This deviation does not impact the quality or usability of the SVOC results.
- The QAPP required the laboratory to include all spiking compounds listed in the method in the matrix spike/matrix spike duplicate (MS/MSD) and laboratory

control sample/laboratory control sample duplicate (LCS/LCSD) samples during the SVOC analysis. ARI actually included the full list of target analytes for full-scan or SIM rather than the list of spiking compounds specified in the method. This deviation enhances the quality and usability of the results because of the additional information on the bias of the data provided from the matrix spike results.

- The QAPP allowed the laboratories to make "certain modifications to achieve the project DQOs" and indicated that any such modifications should be identified in the final report. For SVOC analysis of tissues, a silica fractionation cleanup was added to remove lipids. Because several compounds were also removed by the silica fractionation, additional SIM analyses of the un-cleaned extracts were added to the analysis scheme. This deviation enhances the quality and usability of the results.

3.2.3.5 Chlorinated Herbicides

The QAPP specified hexachloroethane and pentachlorophenol as target analytes for analysis by EPA Methods 8151A (Chlorinated Herbicides) and 8270C SIM. Because the laboratory method detection limit (MDL) study showed that hexachloroethane could not be resolved from the solvent peak, hexahloroethane was not reported by EPA Method 8151A. Hexachloroethane was reported from the 8270C SIM analysis.

Pentachlorophenol was included in the QAPP target analyte list for 8151A; however, during the laboratory's internal quality assurance review of the results conducted prior to reporting the data, the laboratory discovered that the extract cleanup used for herbicides was removing pentachlorophenol. The pentachlorophenol results were therefore flagged "NV" on the hard copy and electronic reports, indicating that the results for this compound should be reported from an alternative analysis. These deviations have no impact on the quality or usability of the results because hexachloroethane and pentachlorophenol were successfully reported by one of the alternate methods. There were no other deviations from the chlorinated herbicide analysis.

3.2.3.6 Chlorinated Pesticides and PCB Aroclors

There were no deviations for chlorinated pesticide and PCB Aroclor analyses for sediment samples. Prior to extraction of the tissue samples, CAS performed a screening level extraction and analysis to determine the appropriate mass of sample to use for extraction to ensure that the tissue sample extracts did not require excessive dilution. The screening level extraction was performed by extracting a small portion of each tissue sample in hexane and injecting an aliquot of the extract into the GC. The chromatograms were reviewed by the laboratory supervisor to determine the appropriate mass of each tissue sample for extraction. Based on the screening results, a smaller mass of tissue than required by the method and laboratory SOP was extracted for selected samples. There were no other deviations from the QAPP for pesticide or PCB Aroclor analyses.

PCBs are known to interfere in the chlorinated pesticide analysis by GC/ECD (EPA Method 8081A). In the laboratory case narratives for the Round 1 data packages, CAS noted matrix interferences for some of the samples. When reviewing the chromatograms for the chlorinated pesticide analysis, LWG and EPA project chemists noted evidence of potential interference in the chlorinated pesticide analysis from the presence of PCBs in selected samples. EPA requested reanalysis of selected Round 1 tissue samples because of possible false positive or biased high chlorinated pesticide results due to the potential interference of PCBs in the chlorinated pesticide analysis. Additional review of the GC/ECD chromatograms for chlorinated pesticides was conducted by LWG project chemists to assess the degree of PCB interference for the chlorinated pesticide analysis.

Under LWG's direction, CAS reanalyzed selected Round 1 samples by gas chromatography/mass spectrometry (GC/MS) using a mass spectrometer equipped with an ion trap (EPA Method 8270C), which increased the sensitivity of the instrument. This methodology is not typically used for tissue analysis; however, the method was developed by CAS for the Round 1 tissue samples. Using this GC/MS ion trap method allowed separation of the chlorinated pesticide target parameters from the PCB interferences while attaining detection limits below those commonly achieved by standard GC/MS methodology. The reanalysis of the tissue samples by GC/MS ion trap was a deviation from the QAPP. This deviation enhances the quality and usability of the results because of the resolution of the PCB Aroclor interferences and confirmation of the target analytes by mass spectrometry.

3.2.3.7 PCB-Congeners

There were several deviations from the QAPP for the analysis of PCB congeners in sediment and tissue samples. The deviations are summarized below:

- The QAPP identified 13 congeners as target analytes for PCB congener analysis by EPA Method 1668A. After publication of the QAPP, but prior to the initiation of PCB congener analysis, the target analyte list for this analysis was expanded to include all 209 congeners listed in Method 1668A as target analytes in all Round 1 sediment and tissue samples.
- The CAS screening results that were generated for PCB Aroclor analysis were provided to Axys to assist them in determining the appropriate mass of sample to extract for PCB congener analysis and to create initial extraction groups. There were numerous samples for which Axys did not extract 75 grams of sample for PCB congener analysis, as specified in the QAPP, because it was determined that for many of the samples a 75-gram aliquot would result in saturation of the mass spectrometer and require excessive dilution of the sample extracts. This deviation enhanced the quality and usability of the results.
- During initial analysis of Round 1 samples, a split of the extract was generated and analyzed on a carbon column to allow for better separation of selected congeners from other congeners and interferences. The use of the carbon column is included in EPA Method 1668A; however, the use of this column was not specifically mentioned in the QAPP. This deviation enhanced the quality and usability of the results.

3.2.3.8 Dioxins and Furans

For selected tissue samples, there was insufficient sample available to extract 75 grams of tissue for dioxin and furan analysis, and therefore a smaller mass of sample was extracted for analysis. The impact on results was minimal because selected target analytes were detected in the affected samples. Additional information on the laboratory detection limits is included in Appendix E. There were no other deviations from the analytical method included in the QAPP.

3.2.3.9 Butyltins

There were no deviations from the analytical method included in the QAPP for the laboratory analysis for butyltins.

3.3 MACROINVERTEBRATE SAMPLE PROCESSING

With one exception, the laboratory methods and quality assurance procedures described in the QAPP (SEA 2002b) were followed for all macroinvertebrate sorting and taxonomic identifications on both multiplate and sediment grab samples. Due to the abundance of organisms in the samples, multiplate replicates were not sorted in their entirety but instead were sorted based on a fixed target count of macroinvertebrates to be removed from the sample (Barbour et al. 1999).

Data management of the taxonomic identifications and species enumerations provided by the contract laboratory followed the process identified in the QAPP (SEA 2002b). This ensures an easy transfer of data to EPA in the required format. Archival procedures (e.g., preservation of vials containing major taxonomic classifications or species) described in the QAPP (SEA 2002b) were also followed so that vials would not be misplaced or corrupted.

Additional details on the processing of benthic infauna samples and validation procedures, as well as the benthic data evaluation and its proposed use in the ERA, are provided in Appendix B: "Ecological Risk Assessment Approach" of the Portland Harbor RI/FS Programmatic Work Plan (Integral et al. 2004).

3.4 CHEMICAL DATA VALIDATION

As required by the QAPP, the first 5% of the data for each sample type and analytical method were submitted to EPA for data validation by EPA's QA Office. Concurrent with EPA's review, the data packages submitted to EPA's QA Office for review were subjected to a full validation by the data validation subcontractor for the Round 1 data, Laboratory Data Consultants, Inc. (LDC) in Carlsbad, CA. All subsequent Round 1 data packages were subjected to Level 3 data validation.

One data package for each sample type and analytical method was submitted to LDC for full validation, as required by the QAPP. The subsequent data packages for each sample type and analytical method were subjected to Level 3 data validation, which includes the evaluation and assessment of the sample results and applicable quality control results reported by the laboratory. The inorganic, organic, and dioxin/furan data were validated in general accordance with guidance specified by the USEPA Contract Laboratory Program National Functional Guidelines for inorganic, organic, or chlorinated dioxin/furan data review (EPA 1994, 1999, 2002), respectively. Modifications were made to the Functional Guidelines to accommodate QA/QC requirements of the non-Contract Laboratory Program (CLP) methods that were used for this project. Data qualifiers were assigned during data validation if applicable control limits were not met, in accordance with the EPA data validation guidelines (EPA 1994, 1999, 2002) and the quality control requirements included in the referenced methods. The data validation qualifiers and definitions are summarized in Table 3-5.

The following laboratory deliverables were reviewed during Level 3 and full data validation:

- The case narrative discussing analytical problems (if any) and procedures
- Chain-of-custody documentation
- Instrument calibration results
- Method blank results
- Results for laboratory quality control samples required by the referenced method, including laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses, matrix spike/matrix spike duplicate (MS/MSD) analyses, surrogate recoveries, and other method specific quality control samples (e.g., serial dilutions for ICP analyses)
- Results for field quality control samples
- Analytical results for analyses performed.

For data packages subjected to full validation, in addition to review and assessment of the documentation identified above, the validation includes verification of reported concentrations of the results and verification of intermediate transcriptions.

After completing the data validation activities for each data package, a data quality report and a tabular summary of qualified data were generated by LDC. The LDC data quality reports are included in Attachment 1 of Appendix E. For the chlorinated pesticide data, additional data validation was conducted by LWG chemists, in response to EPA's data validation report. The data validation process and qualifiers assigned to the chlorinated pesticide data are summarized in a technical memorandum (Attachment 2 of Appendix E). The data validation qualifiers assigned during validation by LDC were added to the laboratory report forms and also added electronically to the laboratory EDD. The revised EDDs were submitted together with the hard-copy data validation reports as the project deliverable. The revised EDDs were then incorporated into the project database, as described in Section 3.4.2 below.

3.4.1 Summary of Qualified Data

Selected data not meeting the data quality criteria were qualified as undetected, estimated, tentatively identified, or rejected during validation, in accordance with the QAPP (SEA 2002b). A summary of the qualified data by parameter group, including the reasons for qualification, is included in Table 3-6. Additional information regarding the qualified data for each parameter group is included in Appendix E. Data qualified as undetected are usable for all intended purposes. Data qualified as estimated or tentatively identified are also usable for all intended purposes, with the knowledge that these data may be less precise or less accurate than unqualified data. Rejected data are not usable for any purpose.

3.4.2 Data Management

The laboratories exported sample, test, batch, and result information into comma-delimited text files with data columns arranged in an order that was recognized by the project's Environmental Quality Information System (EquIS) database. These EDDs were e-mailed to Integral (formerly SEA) where they were checked for proper EQuIS structure and appended with specific information that was unknown or hidden from the labs, such as sampling location, composite information, and field replicate and split information. If any problems were found in the structure of the EDDs, then the laboratory was notified and asked to correct the problem and resubmit the EDD. Each emailed EDD transmission, with the original, unaltered EDD attachment, was stored to document and track the laboratories' delivery of electronic data to Integral.

When the EDD structure checked out satisfactorily and the appended information was completed, the EDDs were checked electronically by loading them into the temporary section of Integral's LWG project database. In the process of loading, EQuIS checked the EDDs for correct lookup codes (such as for analytes, test methods, and sample matrices); proper relationships for results, tests, batches, and samples (to ensure all results match with a test, tests with samples, and sample/test pairs with batches); and that all derived samples (such as replicates, splits, and matrix spikes) had corresponding parent samples. In addition to these checks, EQuIS also checked "less important" characteristics, such as date and time formats and text field lengths, to ensure consistency throughout the database. Any error prevented the EDD from loading until the error was corrected. If errors were found that related to the way the lab was reporting the data or constructing the EDD, then the laboratory was notified and asked to correct the problem and resubmit the EDD. If errors were related to Excel automatically formatting date and time fields, for example, then the error was corrected and steps taken to avoid repeats of the problem (such as changing default settings in the software). Each successfully loaded EDD was stored as loaded to document and track the data that were loaded into Integral's LWG project database.

The data remained in the temporary section of the project database, where they could be queried and examined to address initial questions, until validation by LDC was complete. As LDC completed validation of the data by SDG or small groups of SDGs, the validator qualifiers and reason codes were applied to the data in the temporary section of the database. The validated data were merged into the permanent project database in two large sets: 1) all sediment results except dioxins/furans and PCB congeners, and 2) sediment dioxins and PCB congeners and all tissue results. During the merging process, all previously performed electronic checks were repeated to ensure nothing was incorrectly modified with the application of the validation results.

Several queries were set up in the permanent database to translate the data structure to a form compatible with NOAA's Query Manager. The data translation included creating station and sample identifiers, converting the sample type code, changing the date format, and summarizing the tissue sample composite information. The translated data were imported into an Access file provided by NOAA that contained template tables for the Query Manager structure. These tables included one for stations, sediment samples, tissue samples, sediment chemistry, and tissue chemistry. A table with definitions of qualifiers and one with definitions of analytical method abbreviations were also imported.

Integral's LWG project database contains all of the data reported by the analytical laboratories. This includes field and lab replicates, lab dilutions, results for the same analyte from multiple analytical methods (SW8270 and SW8270-SIM, for example), and laboratory QA samples such as matrix spikes, surrogates, and method blanks.

The data handling rules described in *Guidelines for Data Averaging and Treatment of Non-detected values for the Round 1 Database* (Appendix A) were used to create a data set for the SCRA data users. The guidelines document details the criteria used to create the SCRA database that excludes lab QA results, contains only the most appropriate dilution result and analytical method for each analyte, and contains the average of laboratory duplicates and field splits. Excluding the lab QA results from the project database was a simple database-querying step. Selection of the most appropriate dilution was either done by the reporting laboratory or by the data validator. Selection of the most appropriate analytical method is described in the guidelines document and was accomplished by flagging the appropriate method in the project database. Appendix A describes the rules used for averaging data and carrying qualifiers. Because this was the most intensive data reduction procedure, the data were divided into subgroups, and approximately 40% of each subgroup was verified. If any problems were found with the averaging, then 100% of the subgroup was verified and problems were corrected. When completed, the SCRA database was compiled into a series of database-compatible Excel tables and distributed to the SCRA data users.

4.0 ROUND 1 RESULTS

Round 1 results for the physical system studies and the sediment and tissue chemistry analyses are presented in this section.

4.1 PHYSICAL SYSTEM

4.1.1 Bathymetric Change

An analysis of bathymetric changes observed based on differences between the T1, T2, and T3 surveys was presented in a previous document (Integral et al. 2004, SEA et al. 2003). Similar analyses comparing the T1 and T3 surveys to the T4 survey is discussed fully in Appendix B and summarized here.

Vertical Change Data: T1T4

Data from the T1T4 change analysis indicate that the channel zones show greater stability than nearshore zones; 41% of the entire channel area showed no change compared to 30% of the nearshore area. No change is defined as +/- 0.25 feet, the vertical resolution of the bathymetric surveys. The data also indicate that changes in both the channel and nearshore zones are largely on the order of 1 foot or less. The total number of cells showing changes greater than 1 foot (both shallowing and deepening) over the period of study accounts for only 7.9% of the channel and 15.4% of the nearshore zones. These data continue to support the use of the 1-foot (30-cm) surface sampling interval proposed and used in the Round 2 nature and extent river sediment sampling (Integral et al. 2004, SEA et al. 2003).

Vertical Change Data: T3T4

Despite the relatively high-flow event (>120,000 cfs) that occurred immediately preceding the T4 (February 2004) survey, overall, the bathymetry in both the channel and nearshore zones was relatively stable during this period; 80% of the entire channel area and 55 % of the nearshore area showed no change. The magnitude of changes in both the channel and nearshore zones is consistent with the overall (T1T4) and previous study intervals (T1T2, T2T3), with the majority of changes occurring on the order of 1 foot or less. Areas showing changes greater than 1 foot are less common than in the previous time intervals, accounting for only 0.9% of channel zone and 2.4% of nearshore zone during T3T4.

Patterns in the Distribution of No-Change, Shallowing, and Deepening Areas

The percentages of the area within each river mile showing no change, shallowing, and deepening over the T1T4 and T3T4 study periods were graphed for the channel and nearshore zones (Figures B1 and B2, Appendix B). Patterns exhibited by the data are discussed in the following paragraphs.

T1T4 Patterns
In the channel, deepening cells are most dominant between RMs 5-7, and 10-15.7, which is consistent with the previous classification of these segments as non-depositional or transport environments (Integral et al. 2004). No-change cells dominate RMs 3-5 and 7-9, which have been characterized as transitional and depositional zones, respectively. Shallowing cells peak in RM 2-3 and RM 9-10, which is consistent with their characterization as depositional and transitional zones; these river miles also encompass the reaches that have historically required the most frequent dredging to maintain the authorized channel depth of – 40 feet.

In the nearshore, deepening cells are the dominant type in virtually every river mile, particularly RMs 0-4, 6-10, and 12-14. The proportion of no-change cells varies from 20 to 37% across the entire study area, peaking between RM 5-6 and again between RM 14-15.7. Shallowing cells do not dominate any of the nearshore areas.

T3T4 Patterns
No-change cells clearly dominate both the channel and nearshore areas during the T3T4 time period. In the channel, there is only one segment where no-change cells do not comprise the majority of the area: RM 9-10, where shallowing occurs over nearly half the area, slightly greater than the area of no change. This reach is the upstream end of the major depositional that occurs where the river widens between RM 7 and 10. The deposition observed here from T3 to T4 likely reflects the effects of the winter 2004 high-flow event. Shallowing comprises only 23% or less in all other RM segments. Deepening does not comprise more than 21% of any channel segment during this time period.

In the nearshore zones, deepening is the second-most dominant change seen over the T3T4 time period, comprising between 13 to 36% of each river mile segment. Deepening in the nearshore peaks at RM 4-5; bathymetric change maps (Appendix B) indicate that this deepening is associated with recent dredging in Slip 3, Terminal 4 and possibly propwash in that area. Shallowing comprises only 2 to 18% of the nearshore areas over the T3T4.

Surface Layer Sample Interval Evaluation
The surface layer sample interval for the Round 2 sediment sampling effort was defined as the top 1 foot of sediment, based on the previous bathymetric change evaluations (Integral et al. 2004). Consistent with the previous data, the T1T4 bathymetric data also indicate that the majority of changes are 1 foot or less in magnitude. Areas with less than 1-foot riverbed elevation change account for approximately 92% of the total channel area and 85% of the total nearshore area over the 25-month T1T4 period; this compares with 95% of total channel area and 87% of the total nearshore area over the 16-month T1T3 period. (Appendix B). Maps of the T1T4 bathymetric change data grouped into categories of less than 1 foot of change, greater than 1 foot of shallowing, and greater than 1 foot of deepening, showing the distribution and size of these different subareas, are provided in Appendix B.

4.1.2 Sediment Stakes

The measurements recorded at the low, median, and high stakes locations (low, median, and high refer to relative stake location altitudes at a given sediment stake transect) are presented in Table 4-1 and are illustrated in Figures 4-1, 4-2, and 4-3, respectively.

Low Stakes

The range of mudline elevation changes observed at low stake locations varied from 4 cm (PGE and ATOFINA) to 20 cm (Equilon). Net change from the original mudline elevation over the study period ranged from -14 cm (Terminal 4) to +20 cm (Equilon; Table 4-1).

With the exception of the Gasco location, most low stakes locations generally underwent erosion through December 2002, roughly coinciding with increasing river discharge and flow velocities, but subsequently displayed mixed patterns (Anchor 2004). The Gasco site initially showed significant accretion by September 2002, but subsequent erosion resulted in no net accretion by March 2003. Several sites (U.S. Coast Guard, ATOFINA, Gasco, PGE, and Terminal 4) displayed accretion as river discharges began decreasing following a peak in March 2003. Equilon and GATX, however, displayed erosion following the discharge peak; this behavior is attributed to the relatively exposed nature of these locations compared to the accreting stations, which are somewhat more protected by surrounding embayments or upstream structures (Anchor 2004).

Median Stakes

Disregarding the Willamette Cove location, where the median stake could not be maintained, the range of mudline elevation changes observed at median stake locations varied from 6 cm (U.S. Coast Guard) to 39 cm (Gasco). Net change from the original mudline elevation over the study period ranged from -14 cm (GATX) to +29 cm (Gasco). The median stakes at the various locations were placed at elevations ranging from 0.86 above to 1.07 feet below the target elevation of +4.96 feet (gage datum; Anchor 2004). Consequently, the period of time each stake location was submerged (i.e., influenced by the river) varied, making comparisons of behavior among the locations and relative to river discharge problematic (Anchor 2004).

The measurement records for the median stakes become spotty following the December 2002 monitoring event as the stakes at several locations were missing at various times over the remainder of the study period. Nevertheless, the available median stake data were found to generally correspond to the expected patterns of erosion during periods of increasing flow, accretion during periods of decreasing flow, and mixed patterns during periods of transition (Anchor 2004).

High Stakes

Again disregarding the Willamette Cove location, the range of measured changes at the high stakes locations ranged from 0 cm (Terminal 4) to 19 cm (Gasco). Net change from the original mudline elevation over the available period of record ranged from -4 cm (PGE) to +9 cm (Gasco). The degree of changes observed appeared to be related not only to the elevation of the stakes, several of which were higher or lower than the target elevation (9.99 feet, gage datum), but also to the dynamic environment (relatively high energy at exposed locations or low energy in more protected locations; Anchor 2004). Only the high stakes at the GATX, U.S. Coast Guard, and Equilon locations showed complete records through the study period. Due to the variation of high stake elevations and the lack of complete records for most locations, the high stake data are likely questionable for use in evaluating the relationship between river flow and mudline elevation, and also for comparison with the elevation changes shown by the low and median stake data and bathymetric data (Anchor 2004).

General Location Trends

The stake data show that overall, except for the Gasco location, no consistent relationship was observed between changes in mudline elevations measured at the low and median stake pairs at any of the locations. As this is observational data, the general lack of consistency between low and median stakes appears real and likely reflects the different energy/sedimentary regimes that exist between frequently submerged (low) and frequently subaerial mid-level locations. At Gasco, changes at the low and median stakes appeared notably consistent; erosion and accretion generally occurred concurrently at both stakes. Changes at the Coast Guard low and median stakes appeared to roughly mirror each other, with erosion at one generally occurring concurrently with accretion at the other, though the magnitude of the changes was small (Anchor 2004).

Comparison with Bathymetric Change Data

The T2 (September 2002), T3 (May 2003), and T4 (January 2004) bathymetric surveys were conducted within the timeframe of the July 2002 to June 2004 sediment stake monitoring. Figures 2-2a-c (from Anchor 2004) illustrate the stake monitoring locations with the available T2T3 bathymetric change data in the vicinity. A comparison of stake data to the T2T3 bathymetric change data was conducted by Anchor and is presented in Table 4-2 (from Anchor 2004). Because the stake measurements were not initiated until July 2002 and missing stakes and a lower monitoring frequency beyond the fall of 2003 resulted in a less complete data set, a comparison of the stake data set with the T2T3 bathymetric surveys seemed most appropriate.

To derive the data for this table, the bathymetric change data at the stake locations were visually examined, and the overall magnitude and trend of the data was determined within a circle of approximately 100 feet, and converted to cm for comparison to the stake data (Anchor 2004). Low and median stake entries for the table were derived using the September 2002 sediment stake measurements as the initial mudline elevations for each location and estimating mudline elevations for May 2003 based from plots of the March 2003 and July 2003 data points (Figures 4-1 and 4-2). The low and median stake data were then compared to the direction and magnitude of the bathymetric change data at each stake location (Table 4-2). The results of this comparison indicate that the two data sets generally do not agree at most locations. Both of these data sets are direct measurements of bed elevation changes over time, and there is no reason to believe that this lack of agreement between beach and nearshore riverbed elevation changes is not real. Therefore, these data suggest that there is significant variability in relatively small-scale (0-30 cm) erosion and accretion patterns along onshore (mid-beach) - offshore (shallow subtidal) transects in the LWR. This is likely a function of the seasonal rise and fall of river water levels combined with nearshore anthropogenic factors (e.g., localized boat wakes, prop wash, etc.).

4.1.3 ADCP

The first ADCP survey was conducted during a high-water event on April 19, 2002. Current profiles were collected along 16 transects in the LWR from RM 1 to 11. The most notable result was that at the time of that survey there was a significant flow out of the LWR through the Multnomah Channel (MC). Based on these results, hydrodynamic modelers from West Consultants concluded that the MC needed to be included in the numerical model of the system and that more ADCP flow data should be collected concurrent with the next bathymetry survey, preferably over a tidal cycle, to observe the flow dynamics near the MC as a function of tide.

May 2003 Survey

As recommended by the modeling team, a second ADCP survey was conducted in the LWR during the May 2003 multibeam bathymetry data collection. On May 13, 2003, multiple ADCP profiles were collected along the three transects in the LWR in the vicinity of the MC (RM 3) that had been occupied in April 2002, and a fourth transect was located within the MC. ADCP profiles were repeated 5-6 times along each transect over a 14-hour period to capture ADCP data over a complete tidal cycle. The complete results of this effort have been documented by David Evans and Associates (DEA 2003b).

Table 4-3 shows the discharges (Q, ft^3/sec) observed along the four transects of the May 2003 survey during each ADCP pass. Positive values equal net downstream discharge in the LWR and MC. Note that discharge, Q, does not equate directly to flow velocities because the cross-sectional area of the river varies from place-to-place. Net discharge was downstream along all transects over the entire tidal cycle with two exceptions: during the maximum flood tide (Pass 5), net discharge was upstream at Transect 3 (downstream of the MC) and at Transect 4 (at the MC head). Water velocities along the LWR transects were relatively steady during Passes 1 to 3, the ebb tide. Velocities averaged from 0.25 – 0.5 ft/sec in the LWR channel. Velocities were slightly higher (0.5 – 1.0 ft/sec) in the MC. Near low tide, Pass 4, water velocities in the LWR slowed and began to reverse direction, first along the eastern bank and propagating westward. By Pass 5, the flood tide, the water flow was completely upstream at Transect 3, and reversed direction along the eastern half of the LWR at Transect 4, and along a narrow portion of the eastern bank at Transect 5. By Pass 6, the high tide, flow velocities, both in direction and magnitude, were comparable those seen during the morning ebb tide.

January 2004 Survey

A third ADCP survey was conducted on January 31, 2004 to provide data on current velocities during a high-flow event. The complete results of this effort have been documented in DEA (2004).

Seventeen transects between RMs 0 and 11 were profiled over a 9-hour period during a 130,000 cubic feet per second (130 kCFS) flood event (DEA 2004). Selected transects near the head of the MC (3, 4, 5, and 17) were run once in the morning on a rising tide, and again in the afternoon on a falling tide (DEA 2004). The discharge (Q) data from these transects are included in Table 4-3. Measured discharges just upstream of Multnomah Channel, transect 5, peaked at about 130 kCFS during this high-flow event; this is 3-4 times greater than the peak discharges measured in May 2003. Based on the measured discharges in the Multnomah, approximately 25% of the Willamette flow was exiting the system down the channel during the high-flow event. During the lower flow period in May 2003, over 50% of the Willamette flow was discharging down the Multnomah during the ebbing tide.

Plots of the winter 2004 transect data indicate that flow is predominantly downstream throughout the survey, with current speeds up to a maximum of 3.5 ft/sec observed at RM 11.0 (transect 16). Lower maximum velocities on the order of approximately 2.5 ft/sec are observed in the downstream transects, particularly downstream of the MC. Areas of relatively sluggish flow or eddies are apparent on the margins of certain transects that enter relatively shallow or protected areas (transects 3, 6, 9, 10), and across the entrance to Swan Island Lagoon. River level readings from the Morrison Street Gage at RM 12.8 at the time of the survey display a tidal signal, indicating that the tidal influence on river levels was not overridden by the high-flow event (DEA 2004).

4.2 SEDIMENT AND TISSUE CHEMISTRY

This section describes the Round 1 sediment and tissue chemistry results. Beach and river sediment data are discussed separately due to the different nature of the environments and the sampling methods.

For the purposes of this report, results are presented primarily to assess the nature and extent of contaminants in sediment and tissue within the ISA and may not be applicable to other elements of the RI/FS. When calculating summed analyte concentration values, such as total PCB Aroclors, total LPAHs, total HPAHs, and total 4,4'-DDT (i.e., 4-4'-DDT, -DDD, -DDE), a value of zero was used for non-detects on an individual sample basis. The summed LPAHs include naphthalene, 2-methyl naphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene. Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indenopyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene. 2,3,7,8-Tetrachlorodibenzo-p-dioxin TEQ values were calculated with World Health Organization 1997 TEFs for mammals (see Appendix F). Sample statistics presented in tables and text were calculated using reported detection limit values for non-detects.

4.2.1 Sediment Chemistry Results

This section describes the chemical concentrations measured in beach and riverbed sediment samples. The SCRA data for all sediment samples are provided in an Excel flat file table format in Appendix D. The SCRA data set was generated in accordance with the guidelines specified in Appendix A (see Section 3.4.2). The major analyte groups measured in river and beach sediment samples included conventionals (grain size, TOC), metals, PCB Aroclors, organochlorine pesticides, SVOCs, and herbicides. In addition, butyltins, PCB congeners, VOCs, and dioxins and furans were measured in selected river sediment samples. A complete list of all analytes measured, along with their reference analytical methods, is provided in Table A7-4 of the QAPP (SEA 2002b). Any deviations from the methods prescribed in the QAPP are discussed in Section 3.2.3.

It is important to note that the major objective of the Round 1 river sediment sampling effort was to support the ecological and human health risk assessments (e.g., sediment samples collocated with fish and shellfish tissue samples). While the Round 1 sediment data will be included with and evaluated as part of a detailed assessment of the nature and extent of chemical contaminants in sediments following the extensive Round 2 river sediment sampling program, this Round 1 site characterization summary report includes only brief descriptions of general trends in the spatial distribution of chemicals in river sediments based on the comparatively few river surface sediment samples collected in Round 1.

Figures 4-4 through 4-20 show the mapped distribution, on a chemical-by-chemical basis, of the Round 1 sediment data, including the beach and in-water river samples. The specific chemicals mapped include most of the chemicals that were frequently (greater than 10% of the surface and subsurface samples) detected in the LWR in the historic data set (Integral et al 2004). These include arsenic, cadmium, copper, lead, mercury, zinc, total PCB Aroclors, total 4,4'-DDT, dibenzofuran, 4-methyphenol, bis(2-ethylhexyl) phthalate, total LPAHs, and total HPAHs. The complete data set used to generate these maps, containing all sediment and tissue samples, is provided as an Excel crosstab table, in Appendix F. The concentration categories (e.g., breaks) used in Figures 4-4 through 4-20 are the same ones used in the Work Plan, and these were derived from the frequency distribution in the historic data set for these compounds. In addition, the Round 1 sediment concentrations of 2,3,7,8-TCDD dioxin TEQ and 4,4'-DDT, -DDD, -DDE are mapped and the percent TOC and the percent fines at each station are included on each map. Chemicals that were mapped in the Work Plan but are not mapped in this report include TBT and xylene; these compounds were only analyzed in five and one Round 1 river sediment samples, respectively.

4.2.1.1 Beach Sediments

Summary statistics for all analytes measured in the 22 Round 1 beach sediment samples are compiled in Table 4-4. Figures 4-4 through 4-20 show the mapped distribution, on a chemical-by-chemical basis, of the Round 1 beach sediment data, which are indicated by a "B" in the sample identification code (e.g., 03B031). Graphs showing the frequency distributions of the beach and river sediment data combined (all Round 1 data) for each analyte are included as inserts on the maps to illustrate the overall range of measured concentrations.

As shown in Table 4-4, all metals except for selenium were detected, and most metals were detected in all 22 beach samples.

Three PCB Aroclors (1248, 1254 and 1260) were detected in the beach samples and detected concentrations of total PCBs, based on Aroclors, ranged from 2.5 to 80 µg/kg, with an overall mean value of 15.9 µg/kg. With the exception of chlordane and 4,4'-DDT, -DDD, -DDE, and their isomers, no organochlorine pesticides were detected. Detected concentrations of total 4,4'-DDT (sum of 4,4'-DDT and its metabolites (i.e., 4,4'-DDD, -DDE) ranged from 0.38 to 212 µg/kg, with an overall mean of 15.3 µg/kg.

Of the SVOCs analyzed, carbazole, dibenzofuran, hexachlorobenzene, pentachlorophenol, diethyl phthalate, dibutyl phthalate, bis(2-ethylhexyl) phthalate, 7 LPAHs and 10 HPAHs were detected in the beach samples. Herbicides were not detected in any of the beach samples.

4.2.1.2 River Sediments

Summary statistics for all analytes measured in river sediment samples are shown in Table 4-5. Figures 4-4 through 4-20 show the distribution, on a chemical-by-chemical basis, of the Round 1 sediment data, including all 46 river-bed samples, which are indicated by an "R" in the sample identification code (e.g., 03R001), as well as collocated fish (sculpin) and shellfish (crayfish) tissue samples. Graphs showing the frequency distributions of the sediment data for each analyte for all Round 1 samples (beach and river sediments) are included as inserts on the maps to illustrate the overall range of measured concentrations.

As shown in Table 4-5, aluminum, antimony, arsenic, cadmium, chromium, copper, nickel, and zinc were detected in 100% of the 46 river samples collected in Round 1, while lead was detected in 45 of 46 samples, silver in 30 samples, and mercury and antimony in 18 and 14 samples, respectively. Selenium was detected at only one location. Bulk organotins were detected at all three locations (5 total samples) where they were analyzed, with the exception of tetrabutyltin, which was not detected in any of the samples. Detected tributyltin ion concentrations ranged from 14.2 to 57 µg/kg, with an overall mean concentration of 32 µg/kg.

PCB Aroclors 1242 [7% frequency of detection (FOD)], 1248 (13% FOD), 1254 (44% FOD), and 1260 (41% FOD) were detected in one or more of the sediment samples. Total PCB Aroclors were detected in 67% of the samples, and detected total PCB Aroclor concentrations ranged from 6.6 to 1,500 µg/kg, with a mean value of 239 µg/kg. The pesticides mirex (7% FOD), beta-endosulfan (7% FOD), gamma-hexachlorocyclohexane (4% FOD), and all three isomers of 4,4' DDT, 4,4'-DDD, and 4,4'-DDE were the only pesticides detected in the river sediment samples. Total 4,4'-DDT (sum of 4,4'-DDT and its metabolites) was detected in 50% of the samples tested and ranged in concentration from 0.82 to 10,600 µg/kg, with an overall mean value of 252 µg/kg. The maximum detected concentrations of mirex, beta-endosulfan, and gamma-hexachlorocyclohexane were 130 µg/kg, 130 µg/kg, and 430 µg/kg, respectively.

Of the SVOCs that were analyzed, carbazole (mean 248 µg/kg) was detected most frequently in 91% of the samples, followed by dibenzofuran (mean 117 µg/kg) in 72% of the samples, and bis(2-ethylhexyl)phthalate (mean 1,180 µg/kg) in 72% of the samples. All other detected SVOCs (excluding PAHs) were detected in less than 50% of the samples. PAHs were detected in all 46 samples. Total LPAH-detected concentrations ranged from 29 to 117,000 µg/kg, with a mean value of 5,360 µg/kg. Total HPAH-detected concentrations ranged from 67.7 to 343,000 µg/kg, with a mean value of 21,600 µg/kg.

The only VOC detected was acetone in a single sample (13 µg/kg); acetone is a common laboratory contaminant.

As with the beach sediment samples, no herbicides were detected in the river sediment samples.

Dioxins and furans and PCB congeners were detected in all of the 11 river sediment samples where they were analyzed. Most of the individual dioxin and furan congeners were detected in the 11 samples tested. The calculated 2,3,7,8-TCDD TEQ values ranged from 2.05 to 16,600 pg/g, with an overall mean of 1,540 pg/g.

4.2.2 Tissue Chemistry Results

This section briefly describes the results for chemical concentrations in tissue samples of the various sampled species. The SCRA data for all tissue samples is provided in Appendix F. The SCRA data were reduced according to guidelines specified in Appendix A (see Section 3.4.2). Round 1 tissue exposure point concentrations for the HHRA are provided in Appendix C. Field replicate samples were generated for tissue samples by collecting additional fish in the field and generating two or three composite samples for each replicate station. The composite samples were generated by homogenizing up to five individual fish (or about 350 grams for crayfish and sculpin samples) for each composite sample. Because the field replicate samples for tissue were generated by compositing separate individual fish, the fish field replicate samples were treated as separate samples.

All tissue analytes are listed in Tables A7-5 of the QAPP (SEA 2002b). Any deviations from the QAPP are addressed in Section 3.2.3. In addition to whole-body tissue, fillet tissue samples were also analyzed for the HHRA fish species. Fillets with skin containing the belly flap were analyzed for all analytes except mercury and PCB, dioxin, and furan congeners. Fillets without skin were analyzed for mercury only. Note that whole-body composites contained guts that may have included prey and/or sediment. In this report, PCB congeners were labeled with their IUPAC (International Union of Pure and Applied Chemistry) PCB number for ease of reading.

During data review, a question about the identification of individual Aroclors in sediment and tissue samples arose. Aroclors 1242, 1248, 1254, and 1260 were reported for Round 1 sediment samples, while only Aroclors 1248 and 1260 were reported for Round 1 tissue samples. Review of chromatograms for a subset of the sediment and tissue samples was conducted to evaluate the PCB Aroclor identifications performed by the analytical laboratories. The difference in identification of PCB Aroclors in fish tissue and sediment samples appears to be an artifact of the method used to identify the Aroclors in fish tissue samples (see Appendix E). Differential rates of weathering and metabolism of PCB congeners change the composition and obscure the chromatographic patterns of the Aroclors. The assignment of Aroclor identifications to the fish tissue samples may not reflect the Aroclors from which the individual PCB congeners originated because of the considerable spectral overlap between the Aroclors and the effects of weathering and metabolism on the Aroclors.

4.2.1.3 Brown Bullhead

Table 4-6 provides summary statistics of chemical concentrations in Round 1 brown bullhead tissue samples. Figure 4-21a-b presents concentrations for the selected indicator chemicals and sample data for Round 1 brown bullhead tissue samples.

The mean lipids content of brown bullhead whole-body composites was 2.43%, while the fillet composites had a mean lipids content of 1.08%.

All metals, except for antimony, lead, selenium, and silver, were detected in both whole-body and fillet brown bullhead composites. Metals concentrations were consistently higher in the whole-body composites than in fillet composites, with the exception of mercury. The mean mercury concentration in skinless fillet composites was 0.0608 mg/kg, while the whole-body composites had a mean of 0.0367 mg/kg.

Total PCB Aroclor detected concentrations ranged from 67 to 1,700 µg/kg [404 µg/kg overall mean (including non-detects)] in whole-body samples and from 37 to 1,300 µg/kg (overall mean 354 µg/kg) in fillet samples. The overall mean concentrations of total 4,4'-DDT and its metabolites were 76 µg/kg in whole-body composite samples and 18.8 µg/kg in fillet composite samples. Seven other pesticides were detected in either or both composite types, with overall mean concentrations in the range of 1.1 to 25 ug/kg.

Of all PAHs analyzed, only fluoranthene (40 µg/kg for whole-body and 110 µg/kg for fillet) and phenanthrene (60 µg/kg for whole-body and 125 µg/kg for fillet) were detected in brown bullhead. Bis(2-ethylhexyl)phthalate was the only other SVOC detected (2,700 µg/kg for whole-body and 100 µg/kg for fillet).

PCB congeners and dioxins and furans were analyzed in whole-body brown bullhead composites only. Of the 209 PCB congeners analyzed, virtually all were detected. Dioxin and furan congeners were detected in all of the whole-body tissue composites. The 2,3,7,8-TCDD TEQ values ranged from 3.65 to 18.9 pg/g, with an overall mean of 8.57 pg/g.

4.2.1.4 Black Crappie

Table 4-7 provides summary statistics of chemical concentrations in Round 1 black crappie tissue samples. Figure 4-22a-b presents concentrations for the selected indicator chemicals and sample data for Round 1 black crappie tissue samples.

Black crappie whole-body composites had a mean lipids content of 5.26%, while the fillet composites had a mean of 1.4%.

Metals were detected in both whole-body and fillet black crappie composites, with the exception of antimony, chromium, lead, selenium and silver. Metals concentrations were consistently higher in whole-body than in fillet tissue, with the exception of mercury. The mean mercury concentration in skinless fillet tissue was 0.086 mg/kg, while the whole-body composites had a mean of 0.0394 mg/kg.

Total PCB Aroclor detected concentrations ranged from 85 to 250 µg/kg (mean 134 µg/kg) in whole-body samples and from 19.6 to 32 µg/kg (mean 24.1 µg/kg) in fillet samples. The mean concentration of total 4,4'-DDT and its metabolites was 76.1 µg/kg in whole-body composites and 10.8 µg/kg in fillet composite samples. Nine other pesticides were found in either or both sample types, with mean concentrations ranging from 1.1 to 3.35 ug/kg.

Black crappie samples were not analyzed for SVOCs; however, certain SVOCs were reported in the pesticides analysis. Only hexachlorobenzene (6.9 µg/kg for whole-body) and hexachlorobutadiene (1.67 µg/kg for whole-body) were detected.

PCB congeners and dioxins and furans were analyzed in black crappie whole-body composites only. Of the 209 PCB congeners analyzed, 70% were detected. Dioxin and furan congeners were detected in all of the whole-body tissue composites. 2,3,7,8-TCDD TEQ values ranged from 3.86 to 6.52 pg/g, with an overall mean of 4.61 pg/g.

4.2.1.5 Carp

Table 4-8 provides summary statistics of chemical concentrations in Round 1 carp tissue samples. Figure 4-23 presents concentrations for the selected indicator chemicals and sample data for Round 1 carp tissue samples.

The mean lipids content of carp whole-body composites was 7.88%, while the fillet composites had a mean lipids content of 4.63%.

All metals except antimony and selenium were detected in both whole-body and fillet composites. Metals concentrations were consistently higher in the whole-body composites than in fillet composites, with the exception of mercury. The mean mercury concentration in skinless fillet composites was 0.127 mg/kg, while whole-body composites had a mean of 0.041 mg/kg.

Total PCB Aroclor detected concentrations ranged from 230 to 6,500 µg/kg (mean 1,640 µg/kg) in carp whole-body samples and from 350 to 1,200 µg/kg (mean 812 µg/kg) in fillet samples. The mean concentration of total 4,4'-DDT and its metabolites was 186 µg/kg in carp whole-body composites and 139 µg/kg in fillet composite samples. Five other pesticides were detected in carp tissue samples, with mean concentrations ranging from 1.1 to 10 ug/kg.

Carp fillet samples were not analyzed for SVOCs; however, certain SVOCs were reported in the pesticides analysis. Hexachlorobenzene was the only SVOC detected in fillet tissue composites. In whole-body samples, 2-methylhaphthalene, acenaphthene, fluorene, and naphthalene were the only SVOCs detected, with total LPAH detected concentrations ranging from 111 to 222 µg/kg (mean 167 µg/kg).

PCB congeners and dioxins and furans were analyzed in carp whole-body composites only. Of the 209 PCB congeners analyzed, 72% were detected. Dioxin and furan congeners were detected in all of the whole-body tissue composites. 2,3,7,8-TCDD TEQ values ranged from 7.94 to 49.9 pg/g, with an overall mean of 18.0 pg/g.

4.2.1.6 Clam

Table 4-9 provides summary statistics of chemical concentrations in Round 1 clam tissue samples. Figure 4-24 presents selected chemical concentrations and sample data for Round 1 clam tissue samples.

Lipid concentrations in clam whole-body composites ranged from 0.837 to 1.7%, with a mean of 1.18%.

All metals except selenium were detected. The mean mercury concentration in the clam whole-body composites was 0.00967 mg/kg. All butyltins except for tetrabutyltin were detected. Tributyltin concentrations ranged from 4.4 to 7.6 µg/kg, with a mean of 6.0 µg/kg.

Total PCB Aroclor detected concentrations ranged from 62 to 120 µg/kg, with a mean of 86.3 µg/kg. Detected concentrations of total 4,4'-DDT and its metabolites in whole-body composites ranged from 9.7 to 330 µg/kg, with a mean of 148 µg/kg. Six other pesticides were detected in clam tissue, with mean concentrations in the range of 0.39 to 2.7 ug/kg.

Of all SVOCs analyzed, only benyl alcohol (mean 1,300 µg/kg), phenol (mean 2,600 µg/kg), and four HPAHs were detected in whole-body composites. No phthalates or LPAHs were detected. The only HPAHs detected were benz(a)anthracene (mean 50 µg/kg), chrysene (mean 53 µg/kg), fluoranthene (mean 59.3 µg/kg) and pyrene (mean 71 µg/kg).

Clam samples were not analyzed for PCB congeners and dioxins and furans.

4.2.1.7 Crayfish

Table 4-10 provides summary statistics of chemical concentrations in Round 1 crayfish tissue samples. Figures 4-4 through 4-20 present concentrations for selected indicator chemicals for Round 1 crayfish tissue and collocated sediment samples.

Lipid concentrations in crayfish whole-body composites ranged from 0.16 to 1.3% and a mean of 0.781%.

All metals except for selenium were detected. The mean mercury concentration was 0.0283 mg/kg.

Total PCB Aroclor detected concentrations ranged from 16 to 280 µg/kg, with an overall mean of 30.7 µg/kg; only Aroclor 1260 was detected. All of the DDT isomers, and trans-chlordane, beta-endosulfan, and endrin were detected in one or more of the crayfish samples. The detected concentrations of total 4,4'-DDT and its metabolites in whole-body composites ranged from 1.6 to 78 µg/kg, with an overall mean of 9.15 µg/kg. The overall mean concentrations of the other three pesticides that were detected ranged from 1.15 to 1.34 ug/kg.

With the exception of PAHs, the only SVOCs detected in whole-body composites were 4-methylphenol (mean 112 µg/kg), pentachlorophenol (mean 130 µg/kg), and phenol (mean 520 µg/kg). Phenanthrene, benz(a)anthracene, chrysene, fluoranthene, and pyrene were the only PAHs detected. The only detected concentration of total LPAHs was 97 µg/kg. Total HPAH-detected concentrations ranged from 93 to 380 µg/kg, with an overall mean of 68 µg/kg.

Dioxin and furan congeners were detected in all of the whole-body tissue composites. 2,3,7,8-TCDD TEQ values ranged from 1.84 to 23.8 pg/g, with an overall mean of 5.0 pg/g.

4.2.1.8 Largescale Sucker

Table 4-11 provides summary statistics of chemical concentrations in Round 1 largescale sucker tissue samples. Figure 4-25a-b presents selected chemical concentrations and sample data for Round 1 largescale sucker tissue samples.

Lipid concentrations in largescale sucker whole-body composites ranged from 5.4 to 8.7% and a mean of 7.56%.

All metals except for selenium and silver were detected. The mean mercury concentration was 0.0677 mg/kg.

Total PCB Aroclor detected concentrations ranged from 95 to 2,020 µg/kg, with an overall mean of 819 µg/kg. Detected concentrations of total 4,4'-DDT and its metabolites in whole-body composites ranged from 126 to 580 µg/kg, with an overall mean of 235 µg/kg. Four additional pesticides were detected in one or more samples, with mean concentrations in the range of 2.3 to 11 ug/kg.

The SVOC, bis(2-ethylhexyl) phthalate, was detected at concentrations ranging from 800 to 3,000 µg/kg (overall mean 692 µg/kg). Total detected LPAHs ranged from 42 to 147 µg/kg, with an overall mean of 50.7 µg/kg. No HPAHs were detected.

Largescale sucker samples were not analyzed for PCB congeners and dioxins and furans.

4.2.1.9 Northern Pikeminnow

Table 4-12 provides summary statistics of chemical concentrations in Round 1 northern pikeminnow tissue samples. Figure 4-26a-b presents selected chemical concentrations and sample data for Round 1 northern pikeminnow tissue samples.

Lipid concentrations in northern pikeminnow whole-body composites ranged from 2.3 to 8.1% and a mean of 5.25%.

All metals except for antimony and silver were detected. The mean mercury concentration was 0.28 mg/kg.

Total PCB Aroclor detected concentrations ranged from 370 to 1,800 µg/kg, with an overall mean of 833 µg/kg. Detected concentrations of total 4,4'-DDT and its metabolites in whole-body composites ranged from 145 to 588 µg/kg, with an overall mean of 293 µg/kg. Methoxychlor (17 µg/kg) was the only other pesticide detected in the samples.

The northern pikeminnow whole-body composite samples were not analyzed for SVOCs, PCB congeners, or dioxins and furans.

4.2.1.10 Peamouth

Table 4-13 provides summary statistics of chemical concentrations in Round 1 peamouth tissue samples. Figure 4-26a-b presents selected chemical concentrations and sample data for Round 1 peamouth tissue samples.

Lipid concentrations in peamouth whole-body composites ranged from 6.93% to 10.7 % and a mean of 8.93%.

All metals except for antimony and silver were detected. The mean mercury concentration was 0.0383 mg/kg.

Total PCB Aroclor detected concentrations ranged from 138 to 290 µg/kg, with an overall mean of 187 µg/kg. Detected concentrations of total 4,4'-DDT and its metabolites in whole-body composites ranged from 127 to 215 µg/kg, with an overall mean of 159 µg/kg. One other pesticide, cis-chlordane, was detected (overall mean 2.65 ug/kg).

The peamouth whole-body composite samples were not analyzed for SVOCs; however, certain SVOCs were reported in the pesticides analysis. Hexachlorobenzene (overall mean 5.63 µg/kg) and hexachloroethane (mean 2.08 µg/kg) were the only SVOCs detected.

Peamouth samples were not analyzed for PCB congeners and dioxins and furans.

4.2.1.11 Sculpin

Table 4-14 provides summary statistics of chemical concentrations in Round 1 sculpin tissue samples. Figures 4-4 through 4-20 present selected chemical concentrations data for Round 1 sculpin tissue and collocated sediment samples.

Lipid concentrations in sculpin whole-body composites ranged from 2.2 to 6.0% and a mean of 4.17%.

All metals except for antimony were detected in sculpin. The mean mercury concentration was 0.0416 mg/kg.

Total PCB Aroclor-detected concentrations ranged from 62 to 3,360 µg/kg, with an overall mean of 562 µg/kg. Detected concentrations of total 4,4'-DDT and its metabolites in sculpin whole-body composites ranged from 16 to 2,640 µg/kg, with an overall mean of 181 µg/kg. Ten other pesticides were detected, with overall mean concentrations in the range of 2.52 to 8.53 ug/kg.

Dibenzofuran (overall mean 30.6 µg/kg) and hexachlorobutadiene (overall mean 4.95 µg/kg) were detected in the sculpin whole-body composites. Of the phenols and phthalates analyzed, 4-methylphenol (overall mean 31.6 µg/kg), bis(2-ethylhexyl) phthalate (overall mean 1,620 µg/kg), and di-n-octyl phthalate (overall mean 319 µg/kg) were detected. Three LPAHs were detected in one or more of the whole-body composite samples (acenaphthene, fluorene, naphthalene). Total LPAHs ranged from 29 to 132 µg/kg, with an overall mean of 40.3 µg/kg. No HPAHs were detected.

Dioxin and furan congeners were detected in all of the sculpin whole-body tissue composites. 2,3,7,8-TCDD TEQ values ranged from 7.03 to 54.1 pg/g, with an overall mean of 21.2 pg/g.

4.2.1.12 Smallmouth Bass

Table 4-15 provides summary statistics of chemical concentrations in Round 1 smallmouth bass tissue samples. Figure 4-28a-b presents concentrations for selected indicator chemicals and sample data for Round 1 smallmouth bass tissue samples.

The mean lipids content of smallmouth bass whole-body composites was 5.44%, while the fillet composites had a mean lipids content of 0.818%.

All metals, except for silver, antimony, chromium and selenium, were detected in both whole-body and fillet smallmouth bass composites. Metals concentrations were consistently higher in whole-body than in fillet composites, with the exception of mercury. The mean mercury concentration in skinless fillet composites was 0.0946 mg/kg, while whole-body composites had a mean of 0.0831 mg/kg.

Total PCB Aroclor detected concentrations ranged from 90 to 4,500 µg/kg (mean 1,110 µg/kg) in whole-body samples and from 39 to 93 µg/kg (mean 62 µg/kg) in fillet samples. The mean concentration of total 4,4'-DDT and its metabolites was 198 µg/kg in smallmouth bass whole-body composites and 26.9 μg/kg in the fillet composite samples. Seven other pesticides were detected in either or both composite types, with overall mean concentrations within the range of 1.3 to 12.2 ug/kg.

Smallmouth bass fillet samples were not analyzed for SVOCs; however, certain SVOCs were reported in the pesticides analysis. No SVOCs were detected in fillet samples. With the exception of PAHs, dibenzofuran (overall mean 33.6 μg/kg), bis(2-ethylhexyl) phthalate (overall mean 8,750 μg/kg) and di-n-octyl phthalate (overall mean 504 μg/kg) were the only SVOCs detected in whole-body composites. 2-Methylnaphthalene, acenaphthene, fluorene, naphthalene, phenanthrene fluoranthene, and pyrene were the only PAHs detected. Total detected LPAHs concentrations ranged from 31 to 308 μg/kg, with an overall mean of 75.7 μg/kg. HPAHs were detected in one composite at a total HPAH concentration of 75 μg/kg.

PCB congeners and dioxins and furans were analyzed in the smallmouth bass whole-body composites only. Dioxin and furan congeners were detected in all of the whole-body tissue composites. 2,3,7,8-TCDD TEQ values ranged from 9.37 to 38.1 pg/g, with a mean of 19.7 pg/g.

4.2.1.13 Sub-yearling Chinook Salmon

Table 4-16 provides summary statistics of chemical concentrations in Round 1 sub-yearling chinook salmon whole-body tissue samples. Figure 4-29 presents selected chemical concentrations and sample data for Round 1 sub-yearling chinook salmon tissue samples.

Lipid concentrations in sub-yearling chinook salmon whole-body composites ranged from 2.2 to 3.6% and a mean of 2.9%.

All metals, except for antimony, selenium and silver, were detected in the sub-yearling chinook samples. The mean mercury concentration was 0.0178 mg/kg.

Total PCB Aroclor detected concentrations ranged from 30 to 100 μg/kg, with an overall mean of 55.8 μg/kg. Detected concentrations of total 4,4'-DDT and its metabolites in whole-body composites ranged from 24.2 to 39.5 μg/kg, with an overall mean of 31.2 μg/kg. Five other pesticides were detected with overall mean concentrations in the range of 1.17 to 8.12 ug/kg.

Of all the SVOCs analyzed in whole-body sub-yearling chinook composites, only naphthalene (33 μg/kg) was detected in a single composite (16.7% of the samples).

The sub-yearling chinook salmon samples were not analyzed for PCB congeners or dioxins and furans.

4.2.3 Tissue and Sediment Concentration Distributions

The distributions of contaminants in Round 1 fish and shellfish tissue samples, both between species and spatially within the ISA, are described in this section. The spatial distribution of chemicals in sediment is not discussed here because, as planned, relatively few sediment samples were collected in Round 1, and the sample coverage does not facilitate a useful discussion of contaminant distribution within the ISA. Over 1,000 sediment samples are being collected during Round 2 of the RI/FS. A comprehensive assessment of the distribution of contaminants in sediment will be provided at the conclusion of Round 2 in the Comprehensive Round 2 Site Characterization Summary Report.

4.2.3.1 Collocated Sediment and Tissue

Figures 4-4 through 4-20 present the concentrations of selected indicator chemicals for all collocated Round 1 sediment, sculpin, and crayfish tissue samples. These data are mapped to illustrate the spatial distribution of the data. Frequency distributions showing the relative distributions of the sediment concentrations (dry weight) and sculpin and crayfish tissue concentrations (wet weight) for each compound are included on each map. Appendix F is a tabular compilation of the data included in Figures 4-4 through 4-20. The collocated tissue and sediment data will be fully evaluated and discussed as part of the ecological risk assessment process for the Site in the Preliminary Risk Evaluation Report (Windward, in prep).

4.2.3.2 Comparison of Tissue Concentrations by Species

Table 4-17 provides summary statistics by species for Round 1 whole-body tissue composites and selected indicator chemicals. Table 4-18 provides similar information for the Round 1 fillet tissue composites.

Whole-Body Tissue Concentrations

Most metals were detected at very high FODs (i.e., greater than 90%) in most species. The highest detected and mean concentrations of arsenic were in clams. Cadmium concentrations were highest in carp and clams. Crayfish and clams had the highest concentrations of copper. Lead had the highest detected and mean concentrations in peamouth, followed by those in carp, clams, crayfish, and sculpin. Mercury concentrations were highest in northern pikeminnow, followed by smallmouth bass. Nickel concentrations were highest in carp, followed by largescale sucker. Carp had the highest concentrations of zinc.

The distribution of organic compounds by species is more variable than that for metals. Detailed evaluation and discussion of the contaminant concentrations by species will be provided in the Preliminary Risk Evaluation Report (Windward, in prep). Bis(2-ethylhexyl)phthalate had a zero or low FOD (i.e., 33% or less) for all species in which it was analyzed; this analyte was not detected in carp, clams, crayfish, or juvenile chinook salmon. The highest detected and mean concentrations of bis(2-ethylhexyl)phthalate were in smallmouth bass and sculpin. Total HPAHs had a zero or very low FOD (i.e., 17% or less) for the fish species in which they were analyzed but were detected in 100% of the clam and 96% of the crayfish whole-body tissue samples, which also had the highest concentrations of HPAHs. Total HPAHs were not detected in carp, juvenile chinook salmon, largescale sucker, and sculpin. Total LPAHs were detected in all of the species analyzed for LPAHs, except clams. The highest FODs for LPAHs occurred in crayfish and carp. Smallmouth bass and carp had the highest detected and mean concentrations of total LPAHs.

Total PCB Aroclors were detected in 100% of the whole-body tissue samples for all species with the exception of crayfish, which had a FOD of 44%. The highest detected and mean concentrations of total PCB Aroclors were in carp, smallmouth bass, sculpin, largescale sucker, and northern pikeminnow. Crayfish, juvenile chinook salmon, and clams had the lowest concentrations of total PCB Aroclors. Dioxins and furans were detected all the samples in which they were analyzed; the highest 2,3,7,8 TCDD TEQ values were in sculpin, smallmouth bass, and carp, while the lowest values were in black crappie. 4,4'-DDT or one of its metabolites was detected in 100% of the tissue samples. The maximum total 4,4'-DDT concentration was in sculpin; the highest mean values for total 4,4'-DDT were in northern pikeminnow, largescale sucker, smallmouth bass, carp, and sculpin. The lowest mean values for total 4,4'-DDT were in crayfish and juvenile chinook salmon. Both dibenzofuran and 4-methylphenol had zero or low FODs for all species.

Fillet Tissue Concentrations

Fillet tissue samples were analyzed for fewer species than whole-body samples. Fillet tissue chemistry results are available for black crappie, brown bullhead, carp, and smallmouth bass. With the exception of lead, all metals were detected in all species. The highest concentrations of arsenic, copper, and nickel were in smallmouth bass. The highest concentrations of cadmium, lead, mercury, and zinc were in carp. SVOCs, including PAHs, were only analyzed in brown bullhead fillet samples. Total PCB Aroclors were detected in 100% of the tissue samples, with the highest detected and mean total PCB Aroclors concentrations in brown bullhead and carp, respectively. 4,4'-DDT or one of its metabolites was detected in 100% of the tissue samples. Total 4,4'-DDT concentrations were highest in carp.

4.2.3.3 Spatial Distribution of Tissue Concentrations

The spatial distributions of selected indicator chemicals in crayfish, sculpin, and smallmouth bass are described in this section. Individual fish collected from locations spanning up to 3 river miles were composited in the brown bullhead, black crappie, and carp tissue samples, so it is not constructive to evaluate spatial distributions for these species. The number of samples collected for the other fish and shellfish species does not facilitate a comprehensive discussion of the spatial distribution of their analytes. However, Figures 4-21 through 4-29 present the analytical results for the selected indicator chemicals and the locations for all of the Round 1 tissue samples.

Figure 4-30 presents concentrations by river mile of selected indicator chemicals for the 27 crayfish and 26 sculpin whole-body tissue composite samples. Where notable, apparent trends in the spatial distribution of these crayfish and sculpin tissue concentrations are discussed below.

Relatively elevated lead concentrations (i.e., elevated relative to the other Round 1 crayfish and sculpin tissue samples) in both crayfish and sculpin tissue occurred at Station 04R002 at RM 4.6 and, to a lesser degree, in sculpin at Station 07R006 at RM 7.5. In sculpin, bis(2-ethylhexyl)phthalate concentrations were generally not detected, except for peaks at two relatively distant locations within the ISA: Stations 08R003 (RM 8.2) and 04R004 (RM 4.7). Total HPAH concentrations in crayfish were highest at Station 06R004 (RM 6.8). Total LPAH concentrations in crayfish were not detected except at Station 06R004 (RM 6.8). Similarly, total LPAH concentrations in sculpin were frequently not detected or were relatively low, except at Station 06R004 (RM 6.8). The maximum detected total PCB Aroclor concentration in crayfish tissue occurred at Station 03R005 (RM 3.7). Total PCB Aroclor concentrations in sculpin tissue were quite variable; peak concentrations occurred at Stations 06R002 (RM 6.7), 02R001 (RM 2.4), and 02R015 (RM 2.3). A clear concentration in 2,3,7,8-TCDD TEQ values in crayfish tissue occurred at Station 07R006 (RM 7.3). In sculpin, the maximum 2,3,7,8-TCDD TEQ values occurred at Stations 07R006 (RM 7.3) and 02R001 (RM 2.4). The maximum total DDT concentration in crayfish was at Station 07R006 (RM 7.3). Total DDT concentrations in sculpin peaked at Stations 07R006 (RM 7.3), 07R003 (RM 7.5), 06R004 (RM 6.8), and 03R005 (RM 3.7).

Figure 4-31 presents box plots of selected indicator chemical concentrations for the 14 smallmouth bass whole-body tissue composite samples by river mile locations. Where notable, apparent trends in the spatial distribution of smallmouth bass whole-body tissue concentrations are discussed below. It is important to note that replicate composite samples were collected at three locations, while a single composite sample was collected at other locations. Furthermore, composite samples at locations 06R024 and 09R006 contained only 1 and 2 individual fish, respectively, so some of the apparent trends may be artifacts of the sample collection and compositing.

The cadmium concentration in smallmouth bass whole-body tissue was elevated at location 06R024 (RM 5.5-6.5) relative to the other sample locations. The highest concentration of copper in smallmouth bass was at 09R006 (RM 8.5-9.5). Bis(2-ethylhexyl)phthalate and total HPAHs were either undetected or detected at concentrations near their detection limits in all of the samples except for 04R023 (RM 3.5-4.5), where they were detected at relatively higher concentrations in at least one of the replicate samples. Similarly, total LPAHs were either undetected or detected at concentrations near the detection limits of its constituent compounds in all of the samples except for 07R009 (RM 6.5-7.5), where it was detected at relatively higher concentrations. The highest concentrations of total PCB Aroclors detected in smallmouth bass whole-body tissue samples were from location 08R010 (Swan Island Lagoon). 2,3,7,8-TCDD TEQ values and total 4,4'-DDT concentrations were relatively consistent at the smallmouth bass locations

Figure 4-32 presents concentrations of selected indicator chemical concentrations for the five smallmouth bass fillet tissue composite samples by river mile fishing zones. Given the limited number of samples and lack of replicate composites it is not possible to make conclusions about trends in the fillet tissue samples.

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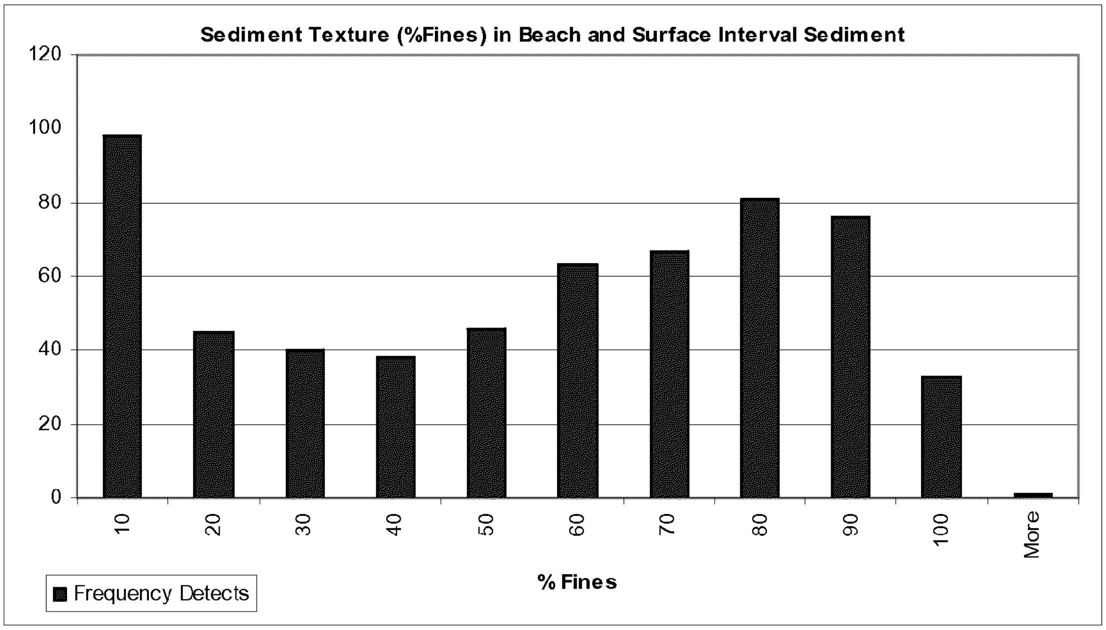

Figure 4-1a. Histograms of Sediment Texture (% Fines) in Round 2A Beach and Surface Interval Sediment Samples.

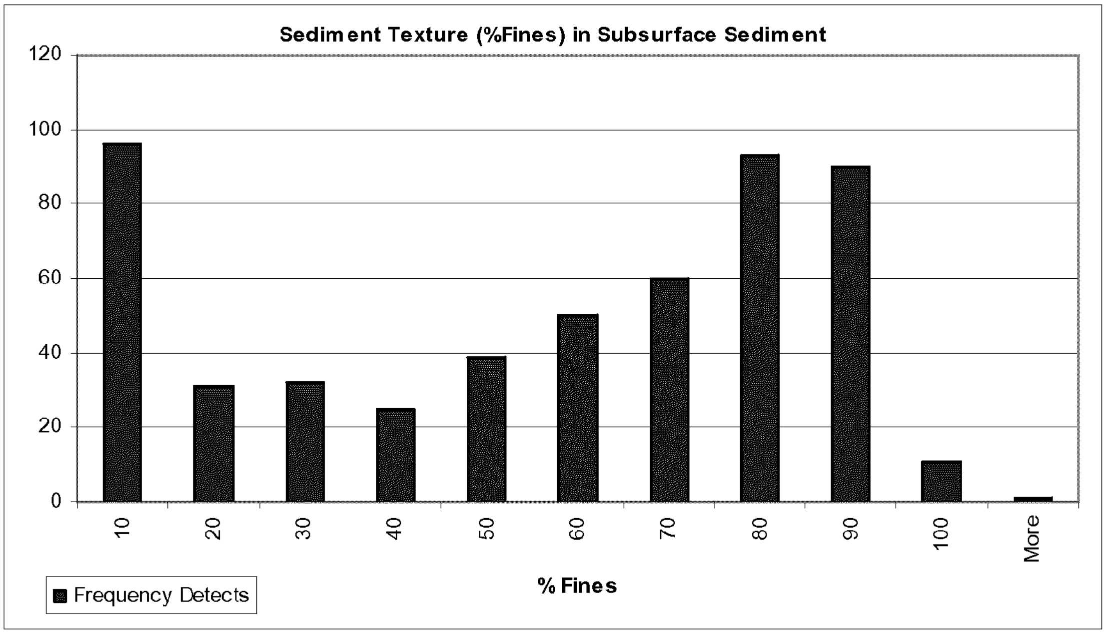

Figure 4-1b. Histograms of Sediment Texture (% Fines) in Round 2A Subsurface Sediment Samples.

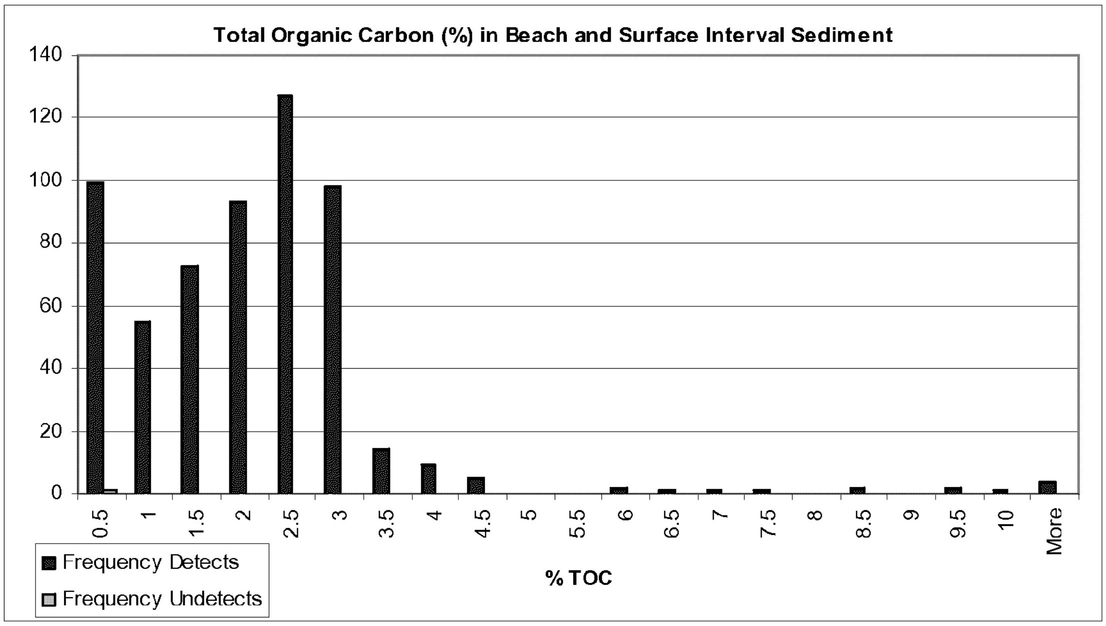

Figure 4-2a. Histograms of TOC in Round 2A Beach and Surface Interval Sediment Samples.

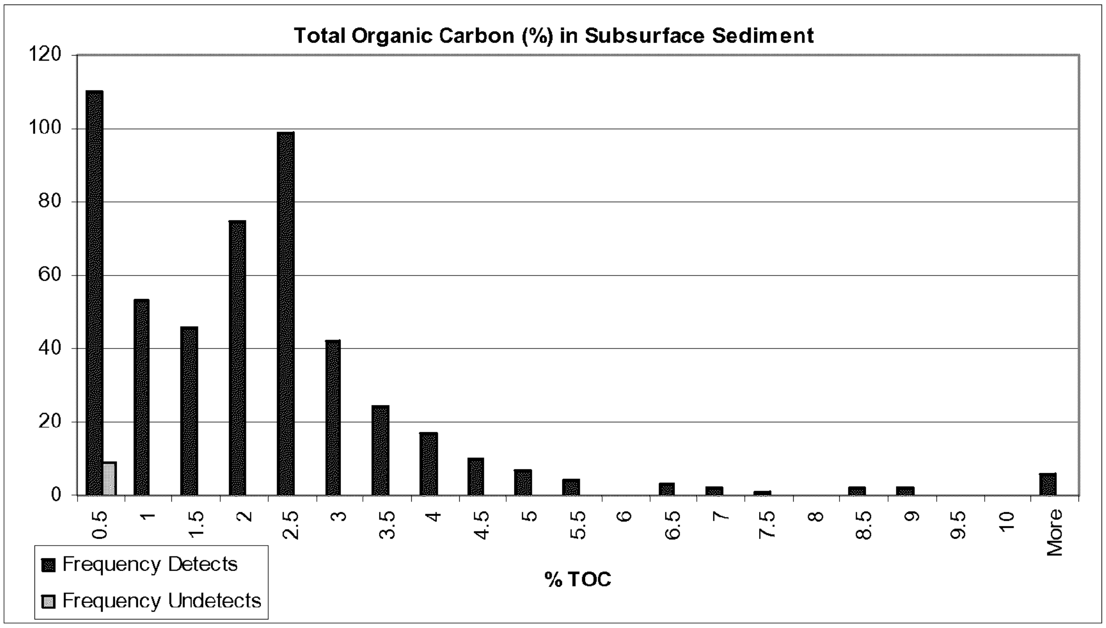

Figure 4-2b. Histograms of TOC in Round 2A Subsurface Sediment Samples.

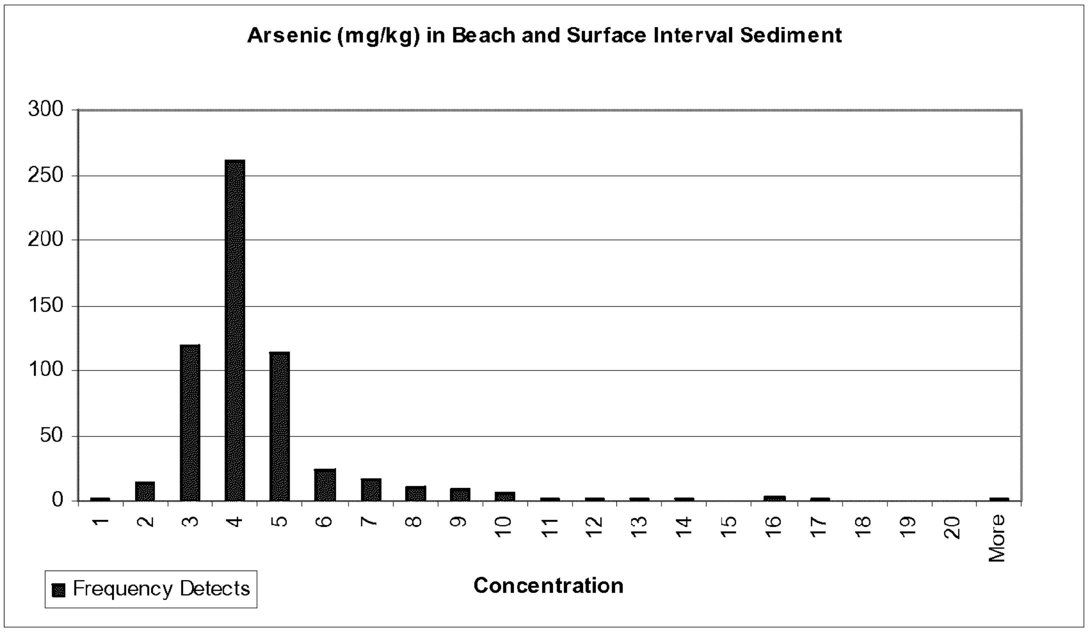

Figure 4-3a. Histogram of Arsenic Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

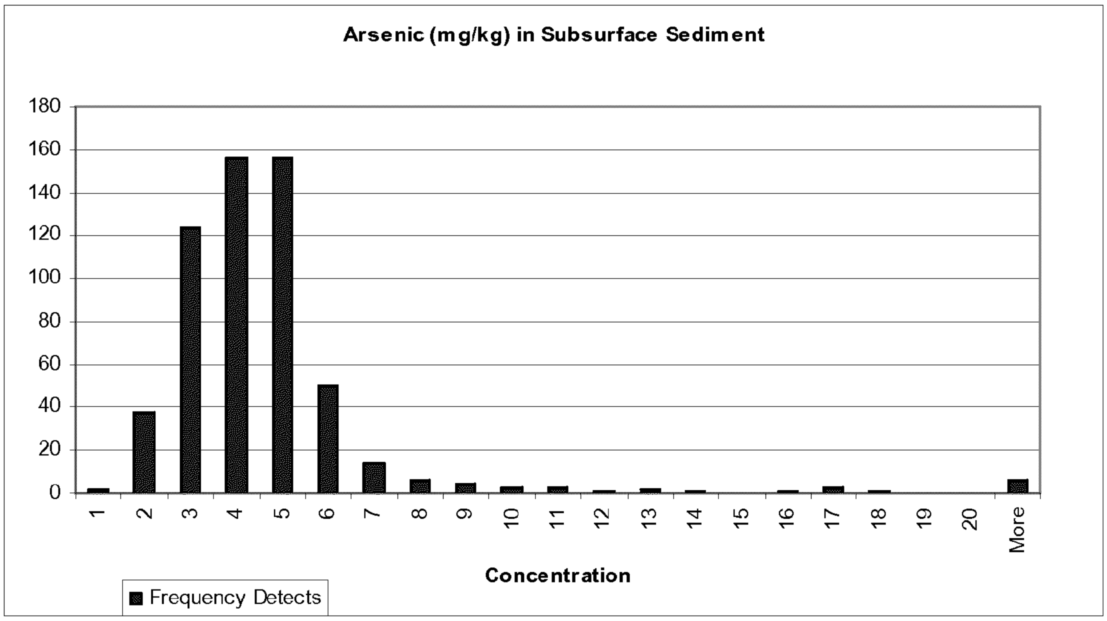

Figure 4-3b. Histogram of Arsenic Concentrations in Round 2A Subsurface Sediment Samples.

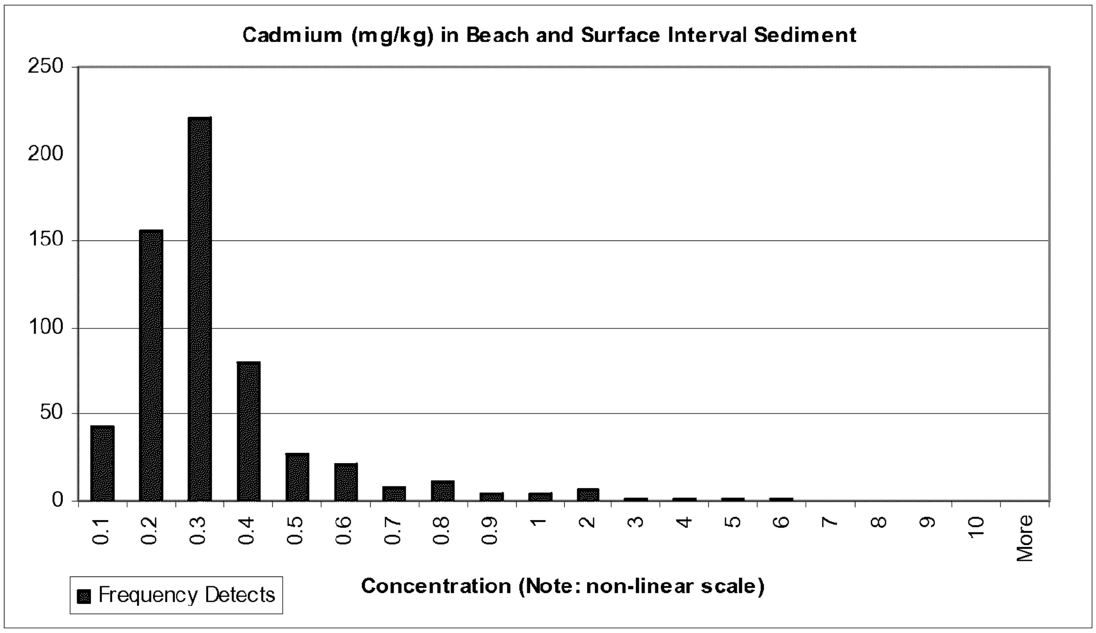

Figure 4-4a. Histogram of Cadmium Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

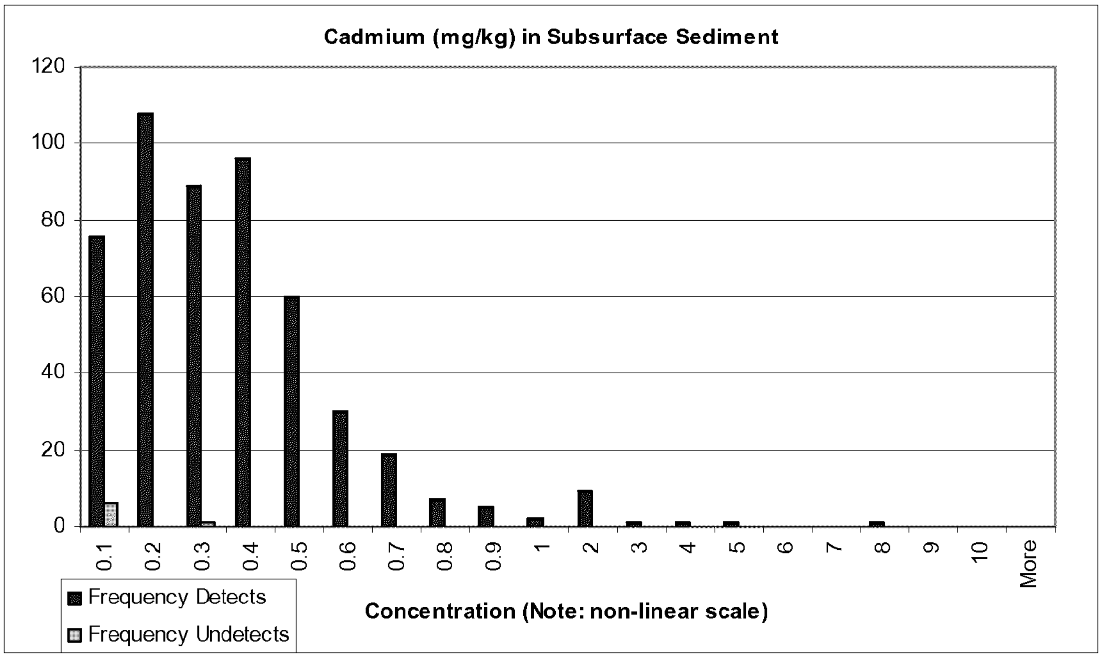

Figure 4-4b. Histogram of Cadmium Concentrations in Round 2A Subsurface Sediment Samples.

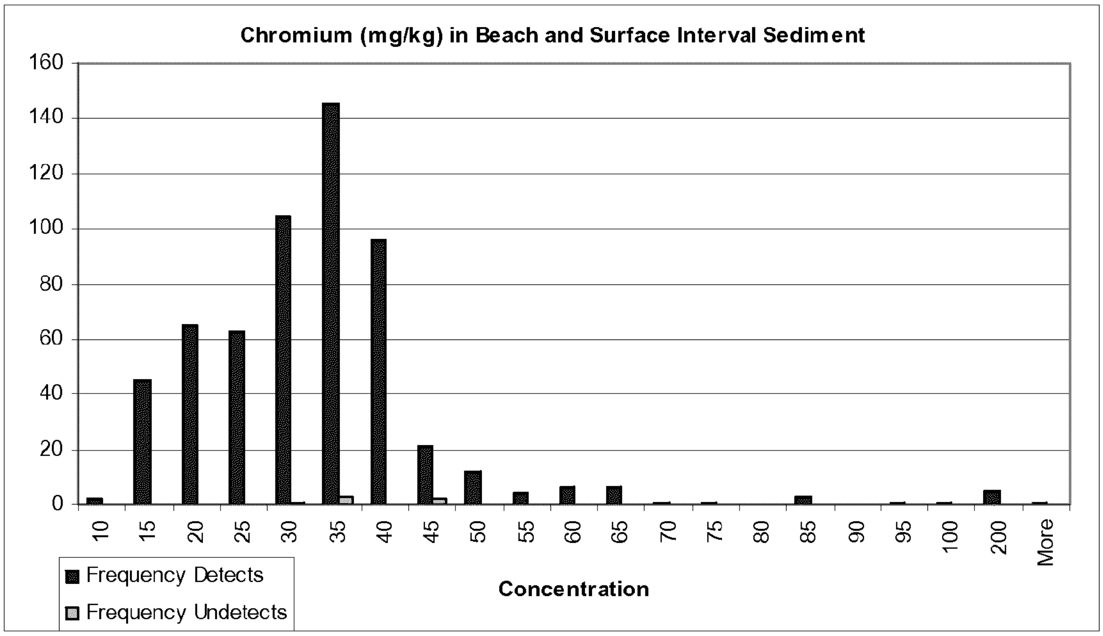

Figure 4-5a. Histogram of Chromium Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

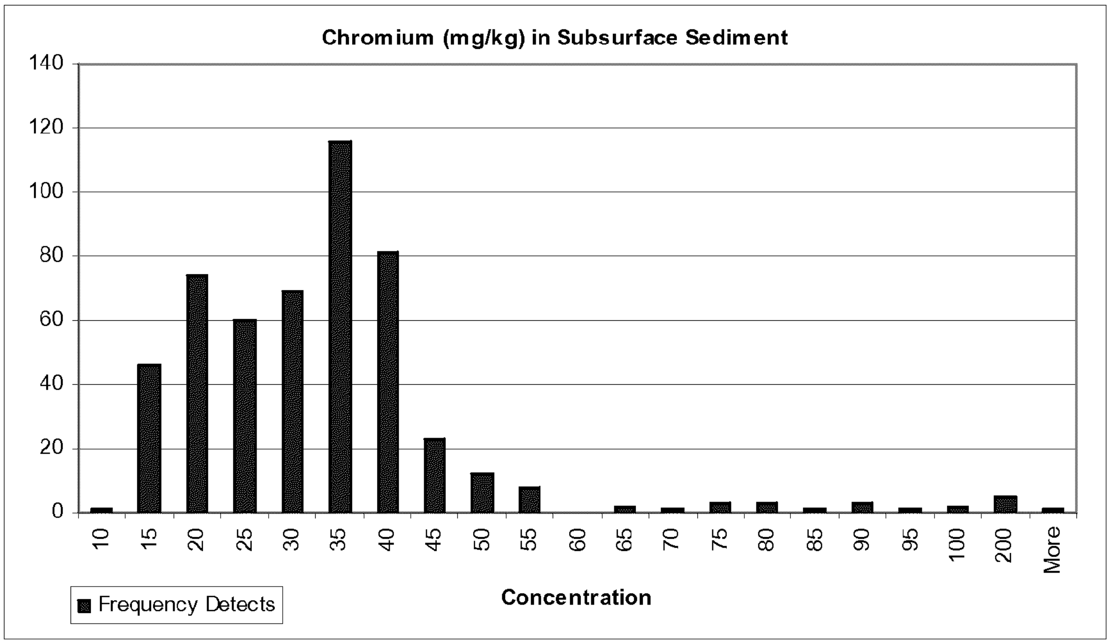

Figure 4-5b. Histogram of Chromium Concentrations in Round 2A Subsurface Sediment Samples.

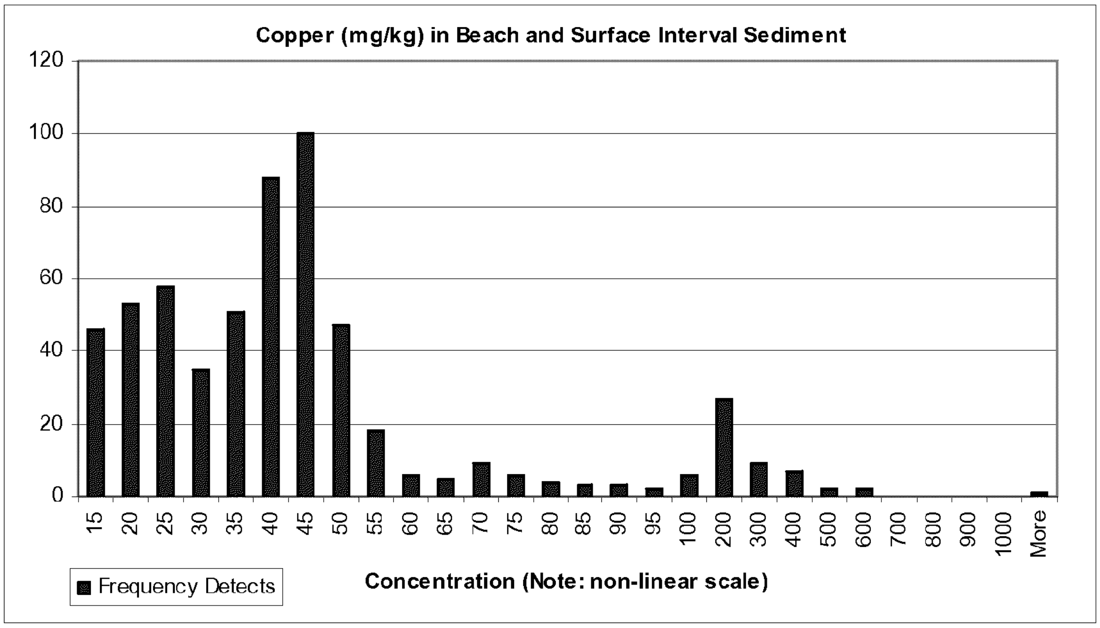

Figure 4-6a. Histogram of Copper Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

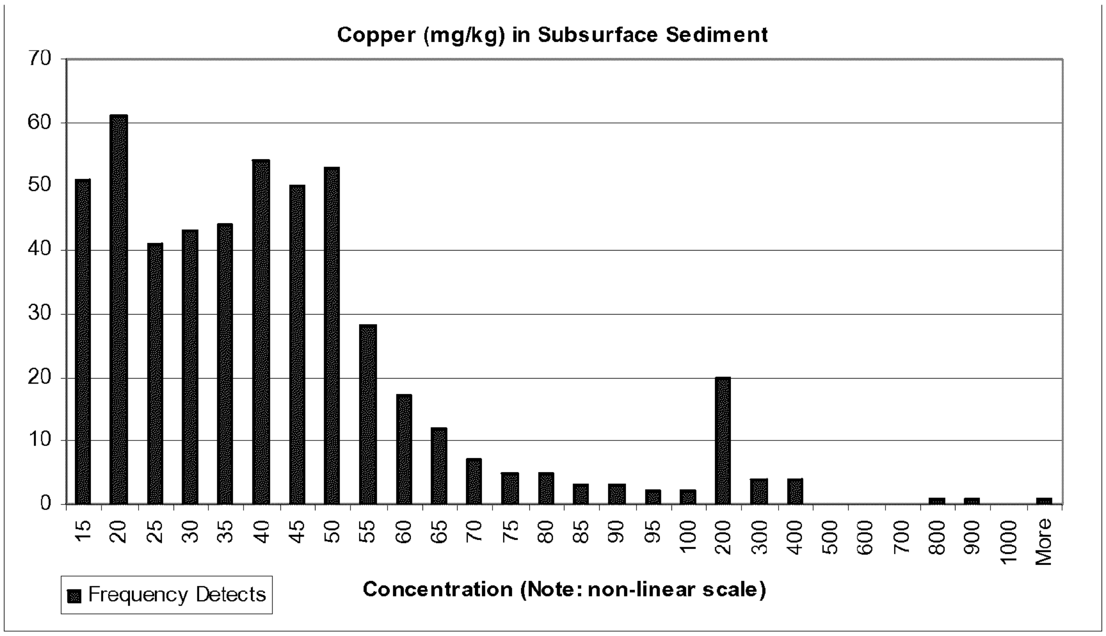

Figure 4-6b. Histogram of Copper Concentrations in Round 2A Subsurface Sediment Samples.

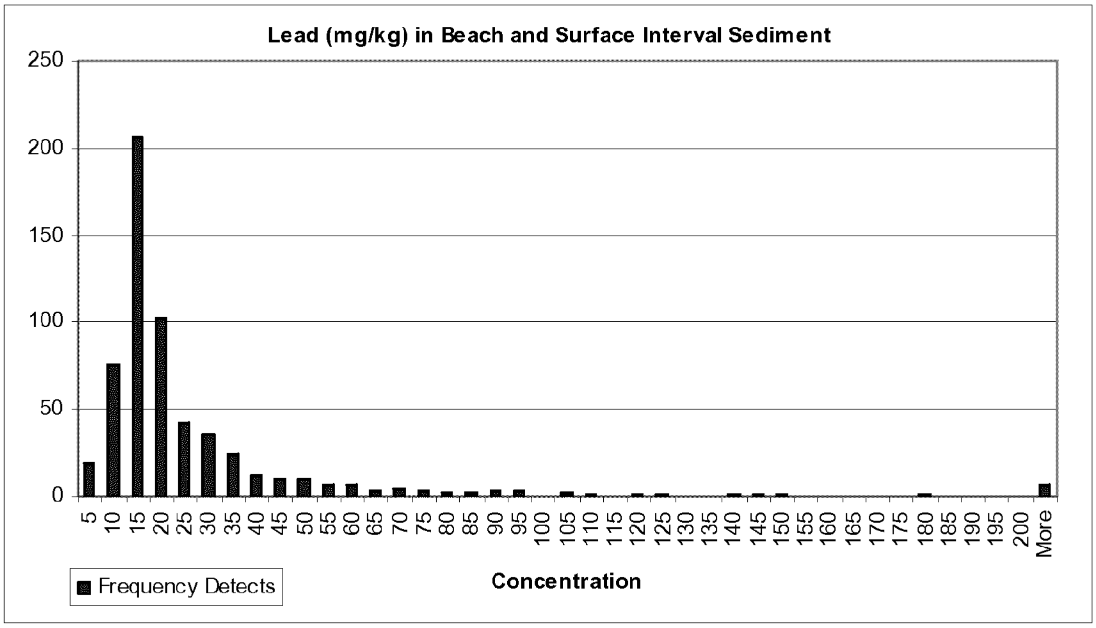

Figure 4-7a. Histogram of Lead Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

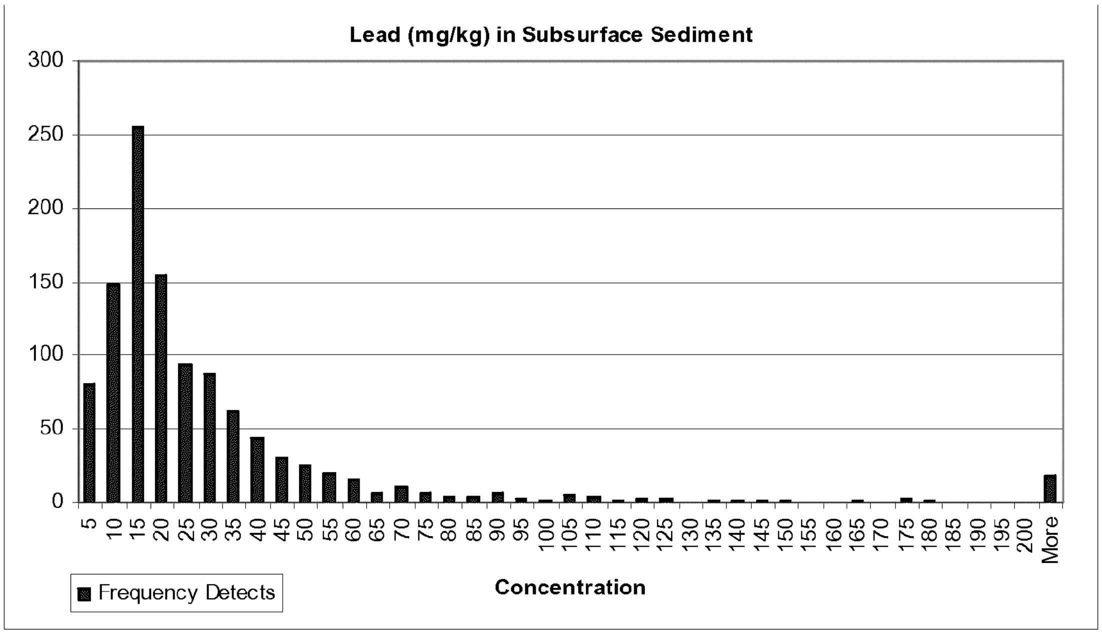

Figure 4-7b. Histogram of Lead Concentrations in Round 2A Subsurface Sediment Samples.

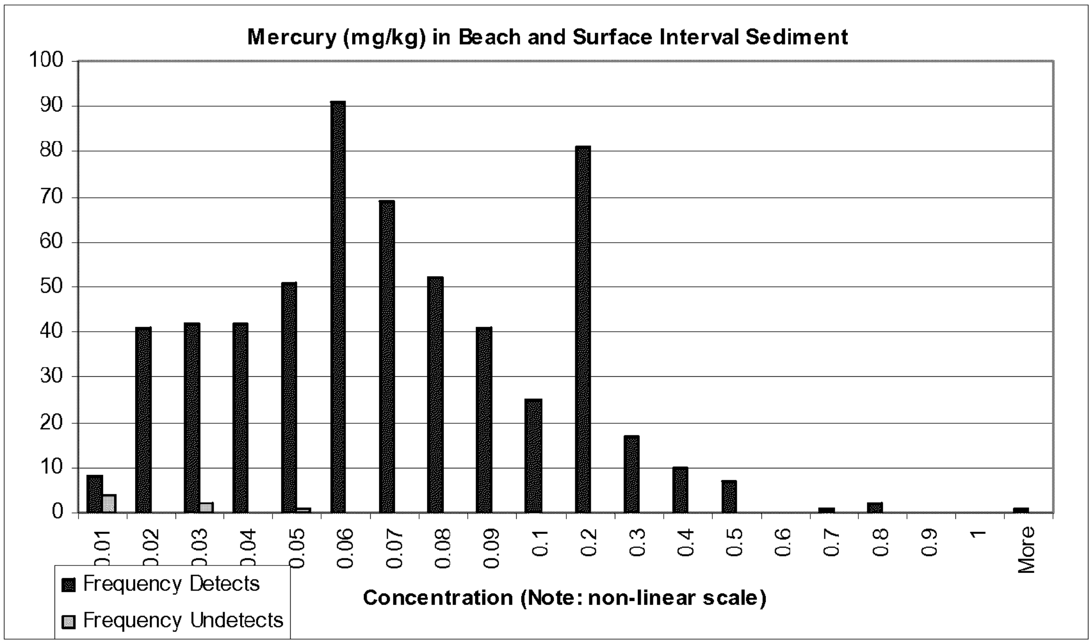

Figure 4-8a. Histogram of Mercury Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

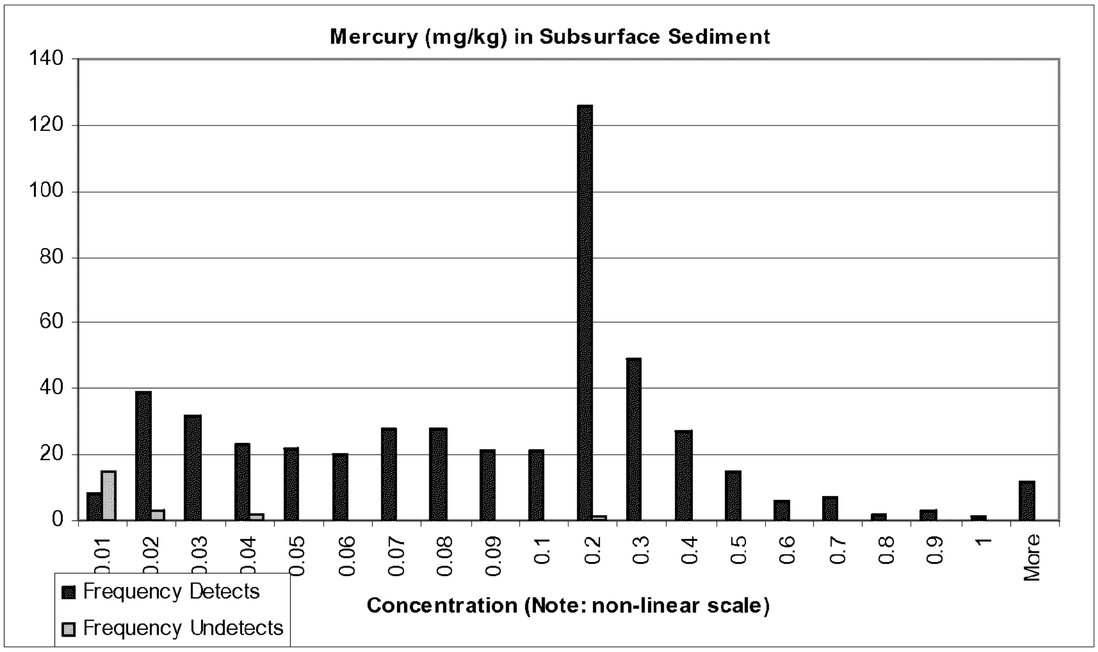

Figure 4-8b. Histogram of Mercury Concentrations in Round 2A Subsurface Sediment Samples.

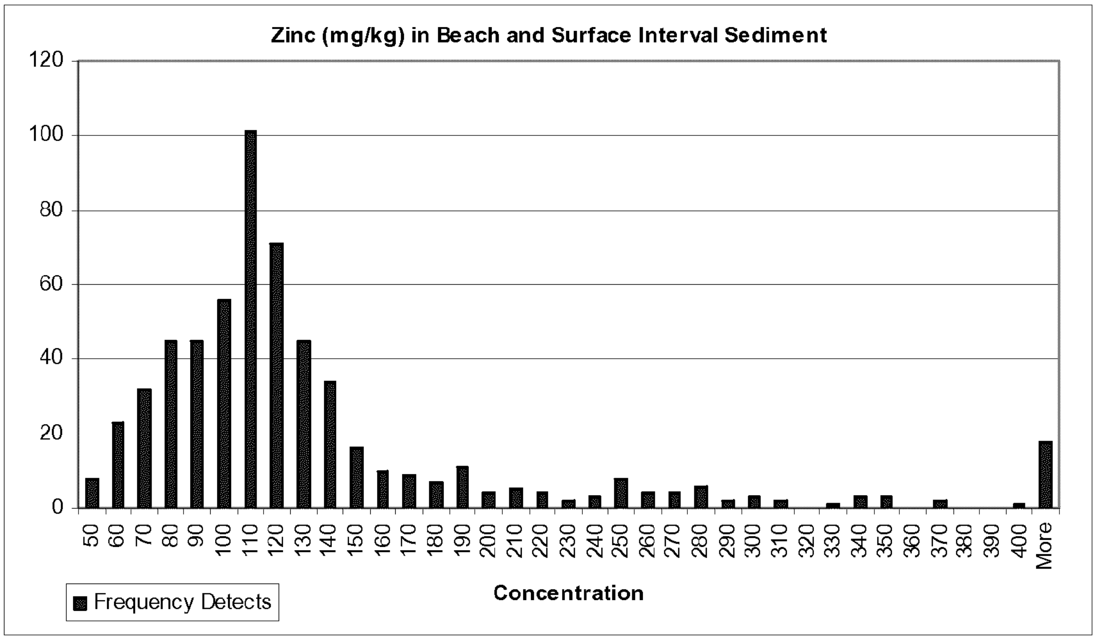

Figure 4-9a. Histogram of Zinc Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

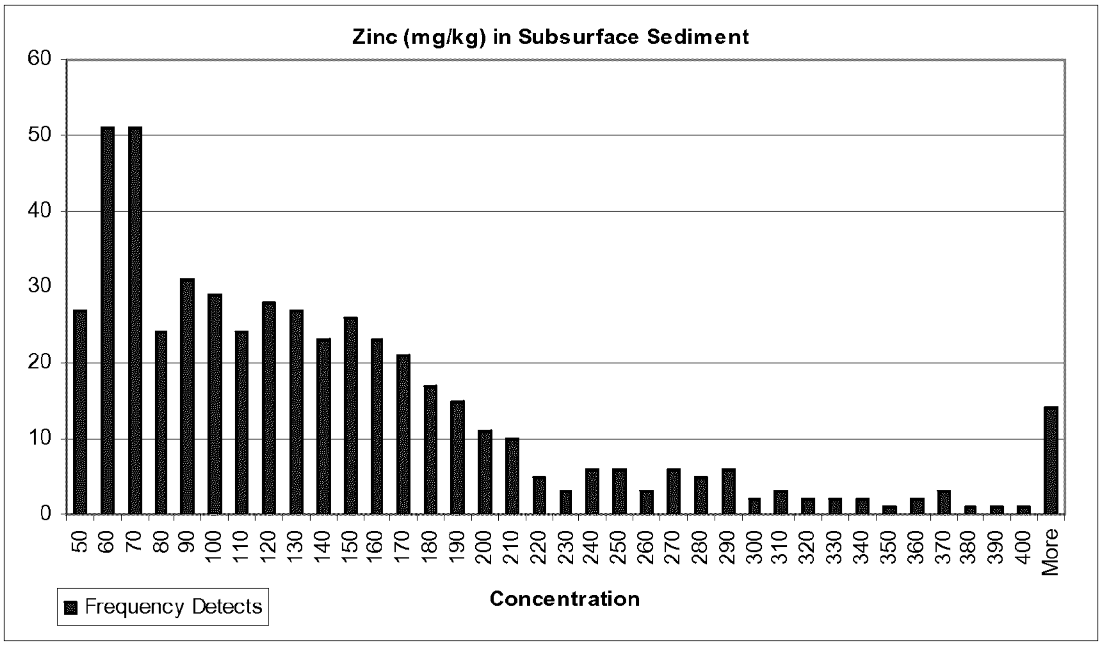

Figure 4-9b. Histogram of Zinc Concentrations in Round 2A Subsurface Sediment Samples.

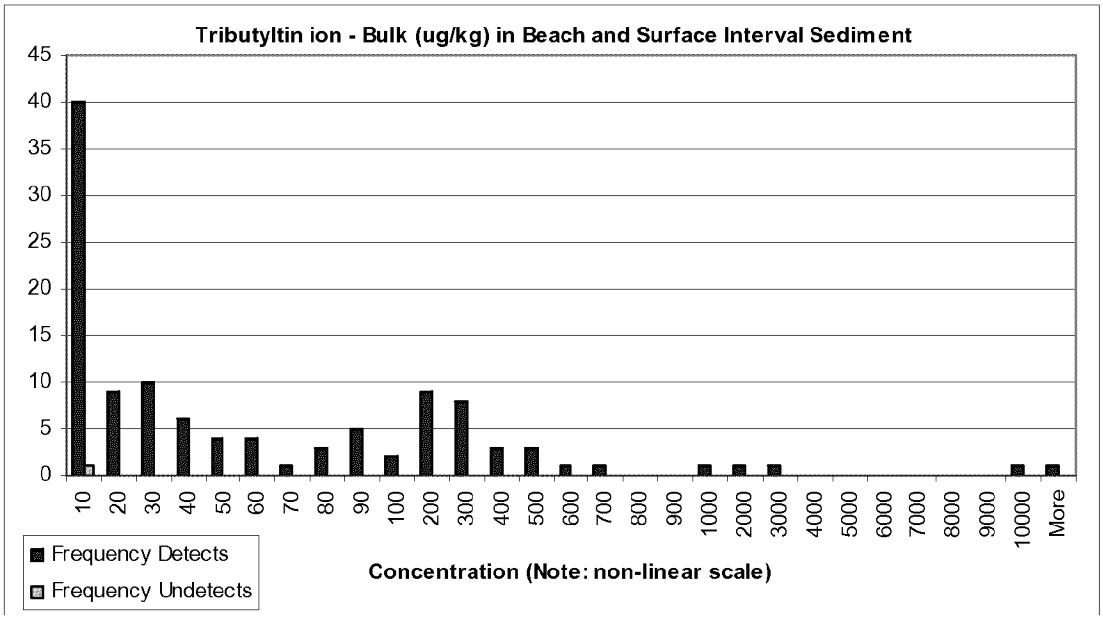

Figure 4-10a. Histogram of TBT Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

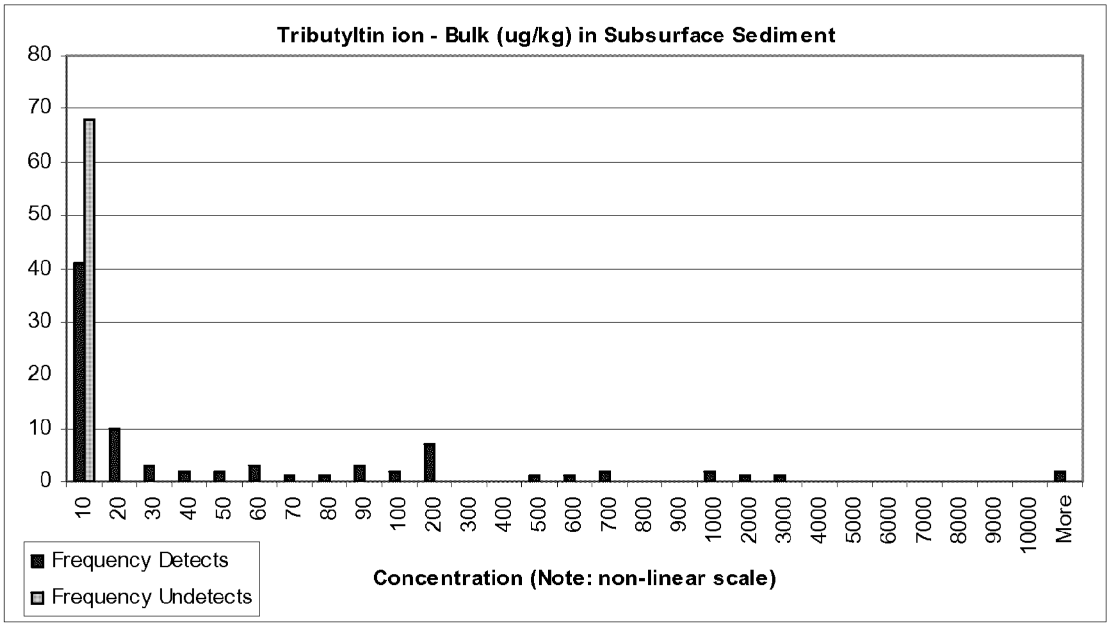

Figure 4-10b. Histogram of TBT Concentrations in Round 2A Subsurface Sediment Samples.

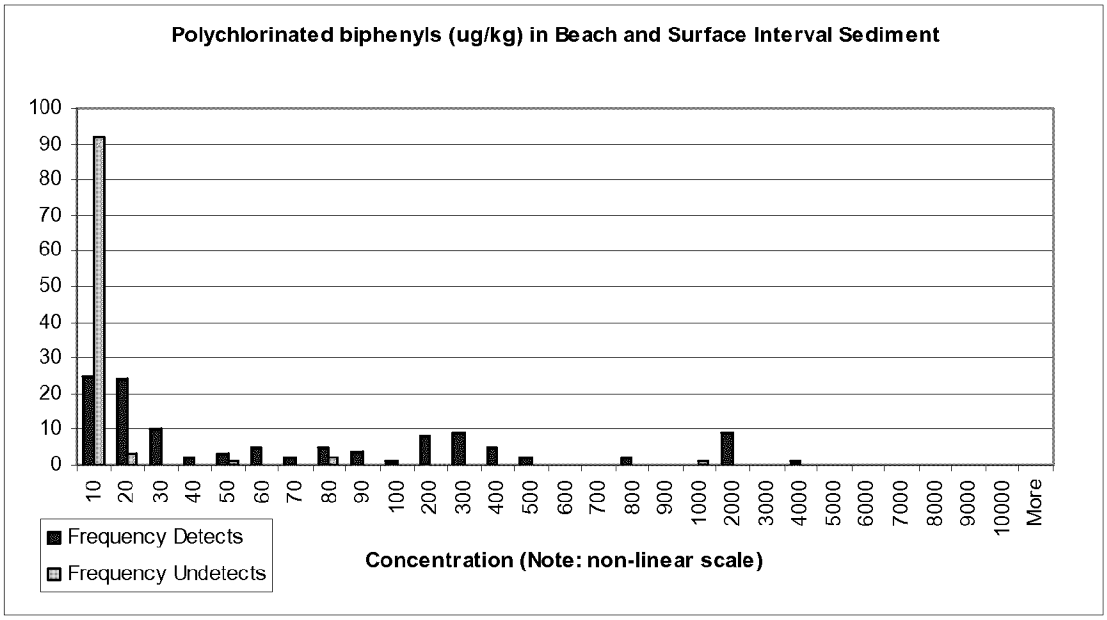

Figure 4-11a. Histogram of Total PCB Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

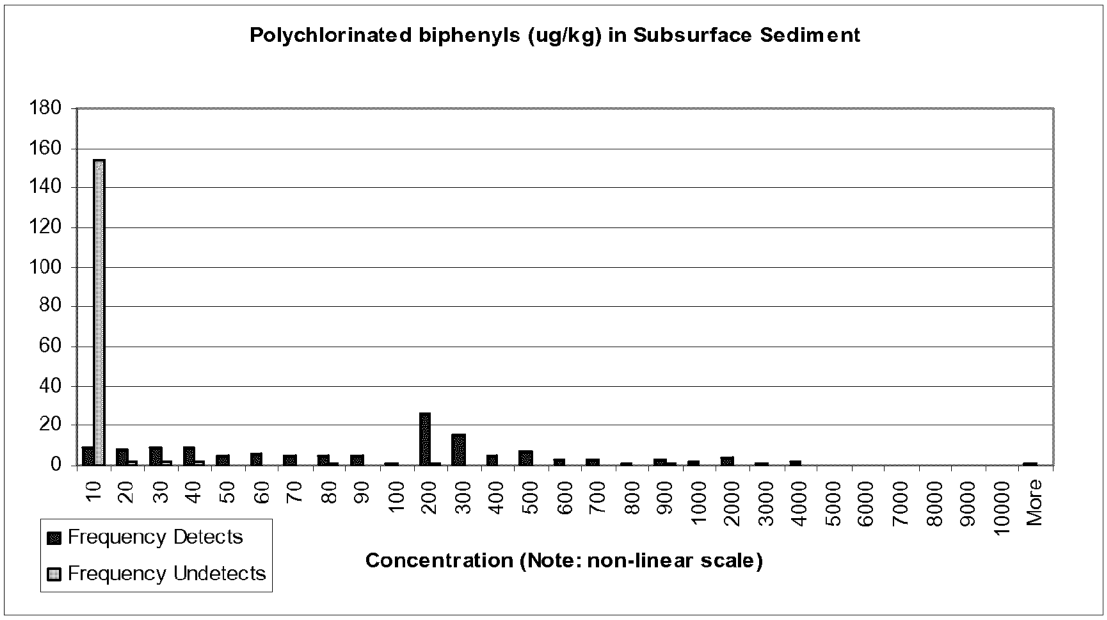

Figure 4-11b. Histogram of Total PCB Concentrations in Round 2A Subsurface Sediment Samples.

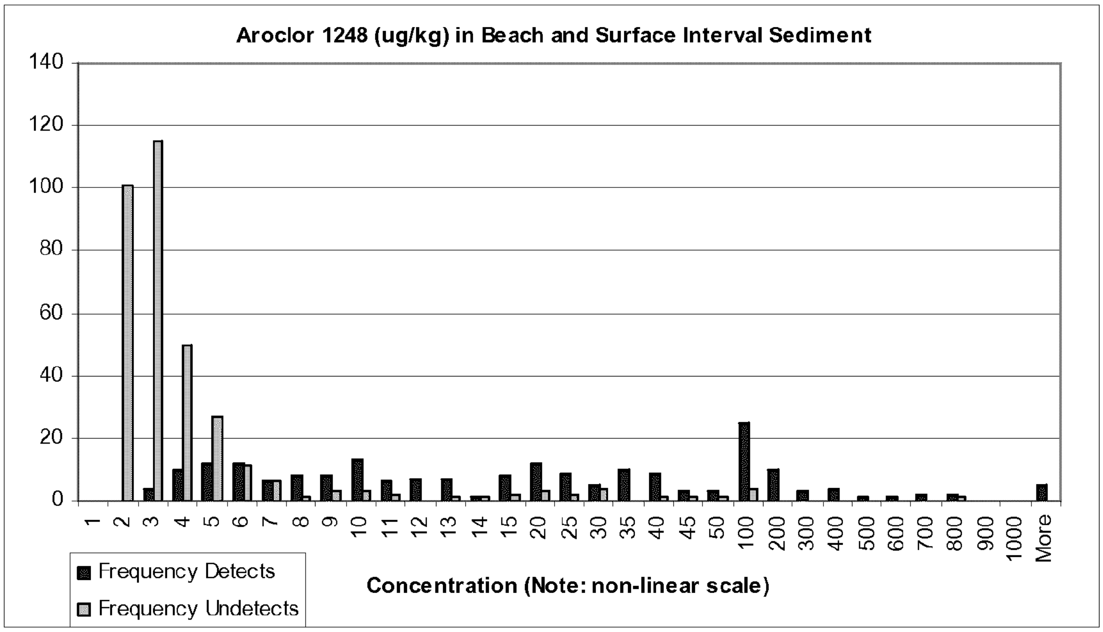

Figure 4-12a. Histogram of Aroclor 1248 Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

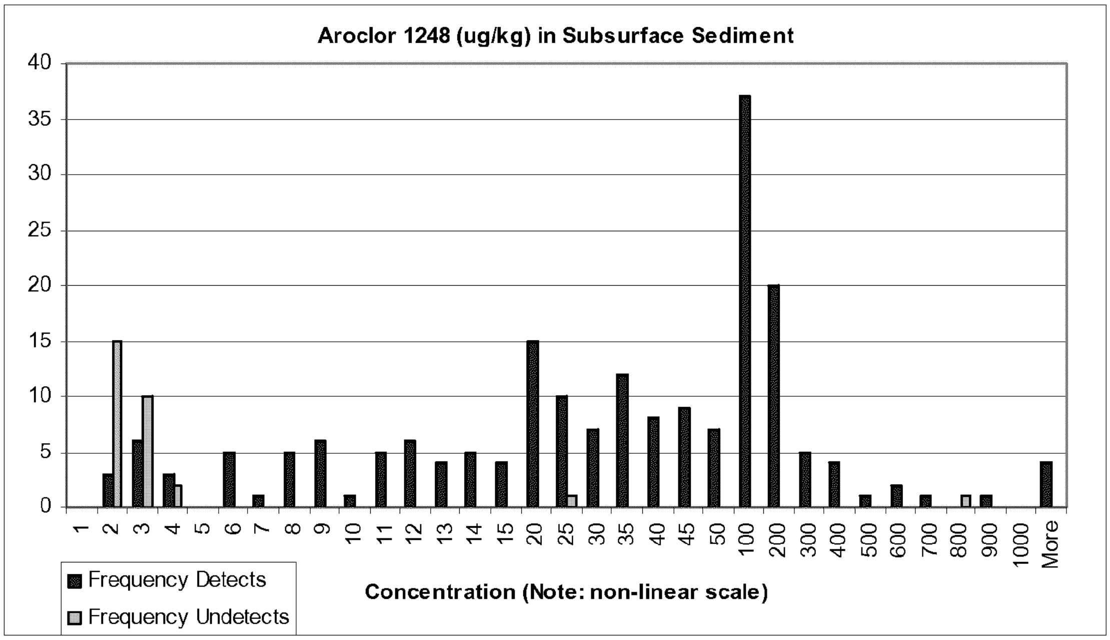

Figure 4-12b. Histogram of Aroclor 1248 Concentrations in Round 2A Subsurface Sediment Samples.

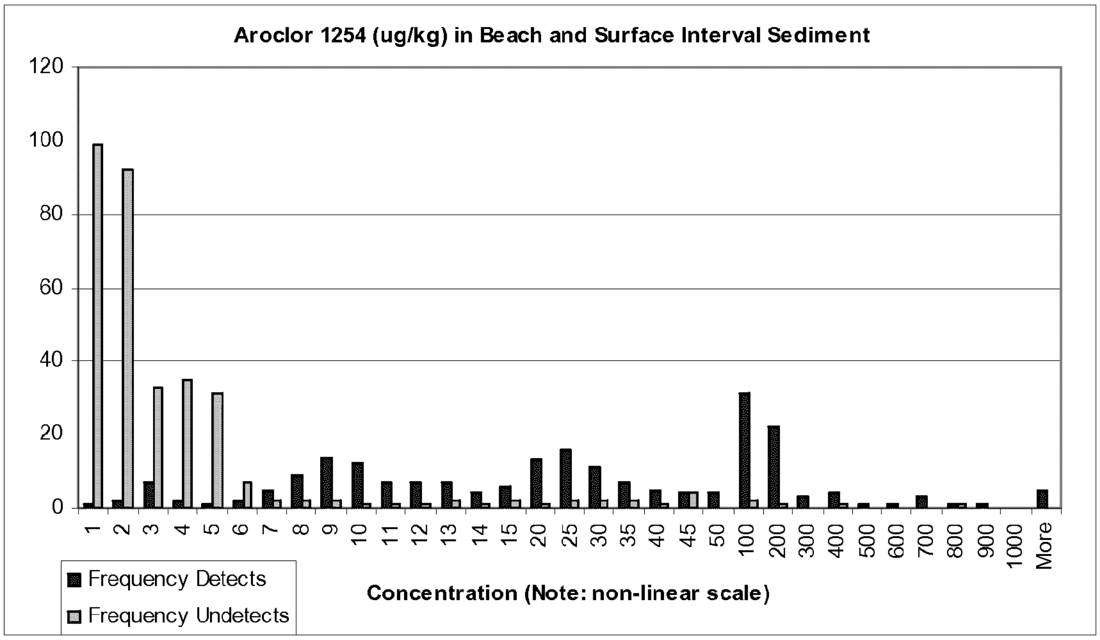

Figure 4-13a. Histogram of Aroclor 1254 Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

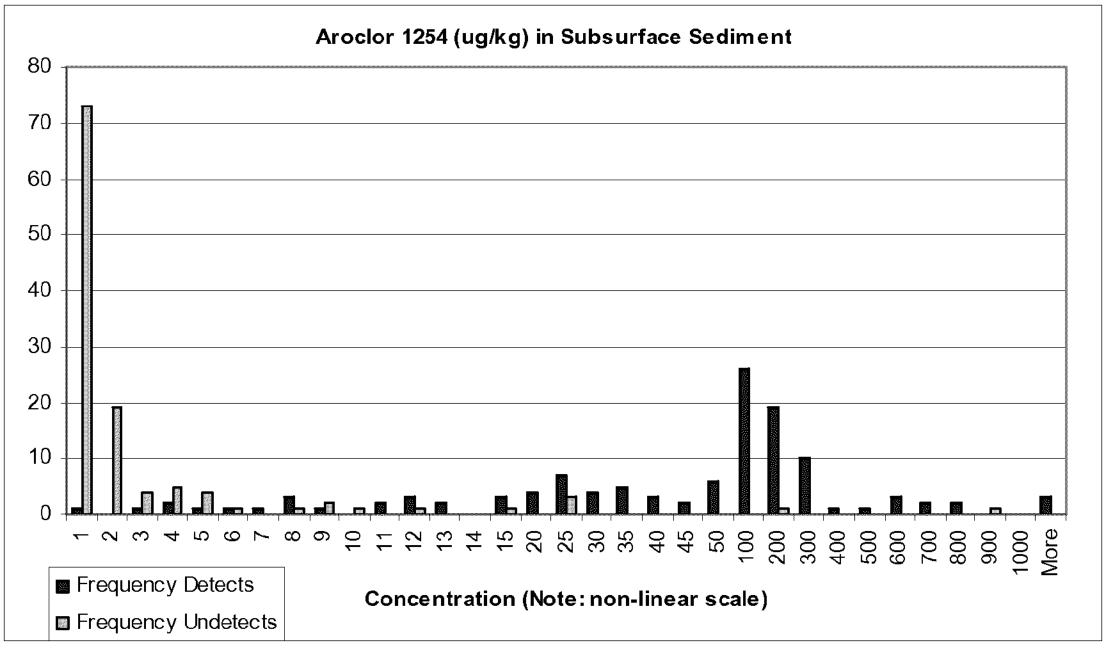

Figure 4-13b. Histogram of Aroclor 1254 Concentrations in Round 2A Subsurface Sediment Samples.

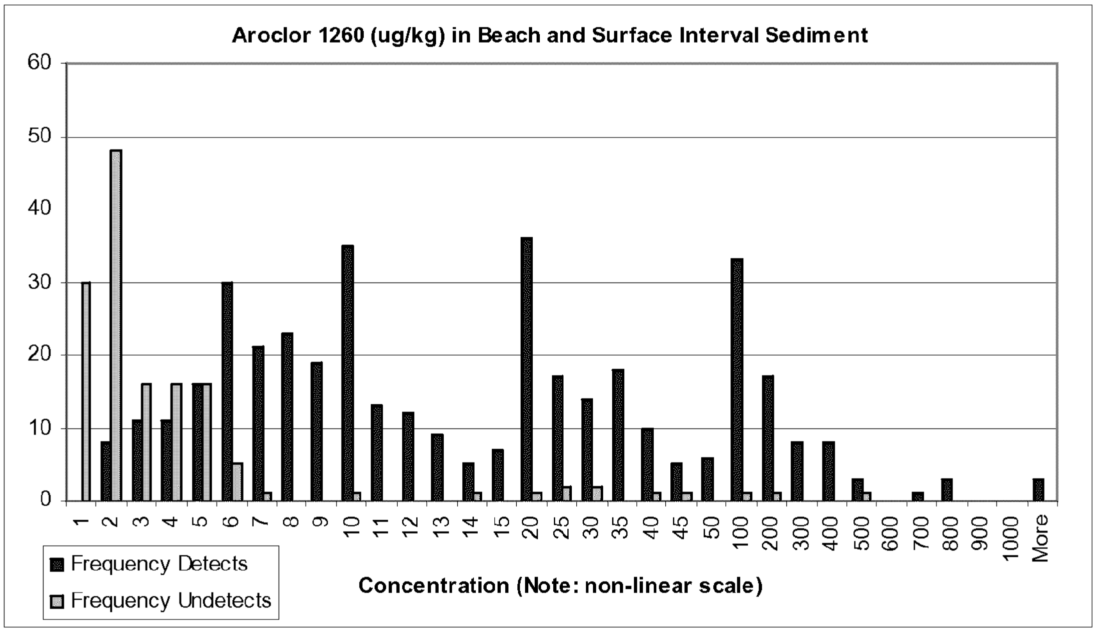

Figure 4-14a. Histogram of Aroclor 1260 Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

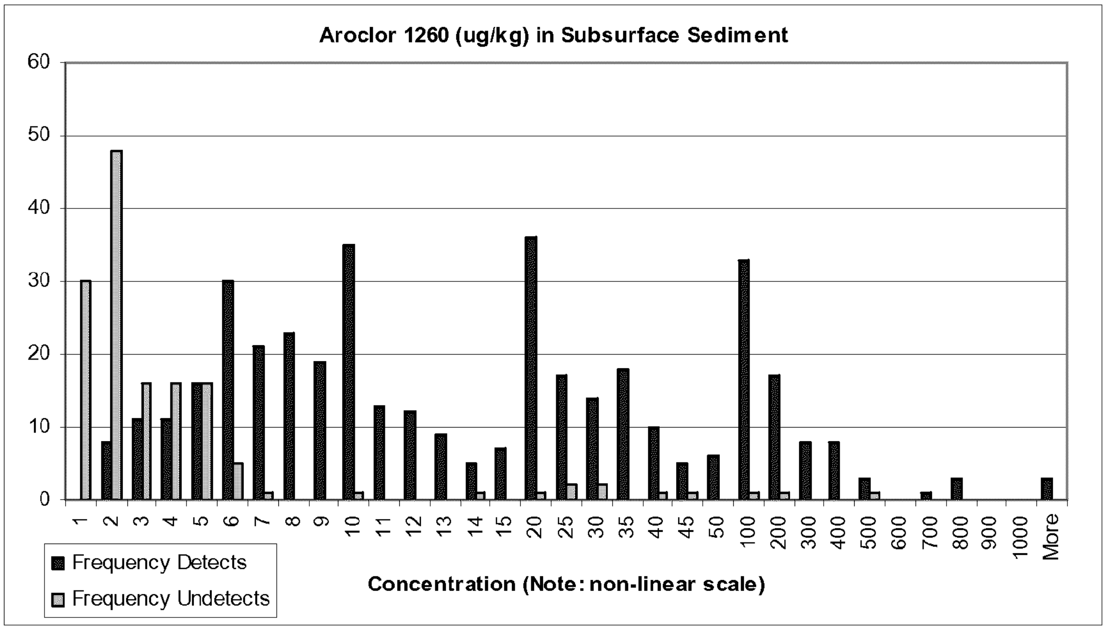

Figure 4-14b. Histogram of Aroclor 1260 Concentrations in Round 2A Subsurface Sediment Samples.

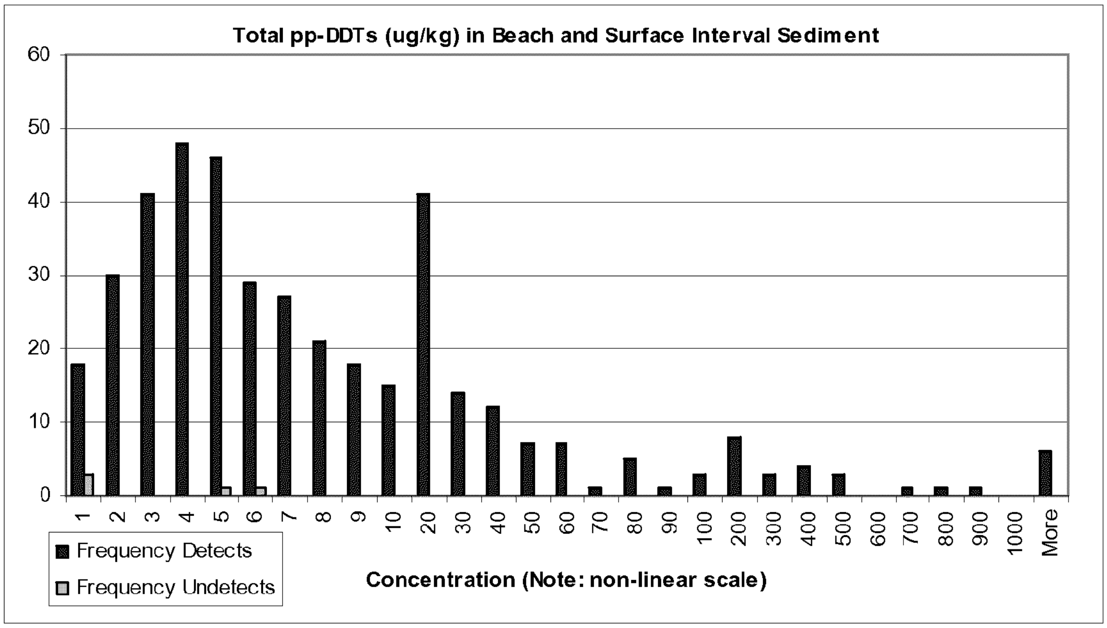

Figure 4-15a. Histogram of Total DDT Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

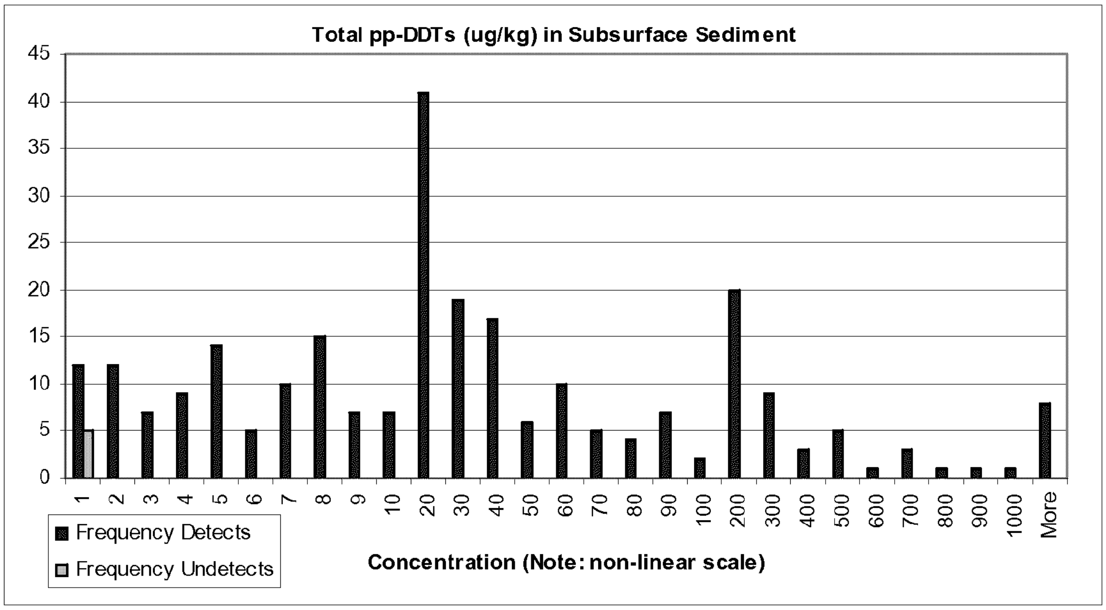

Figure 4-15b. Histogram of Total DDT Concentrations in Round 2A Subsurface Sediment Samples.

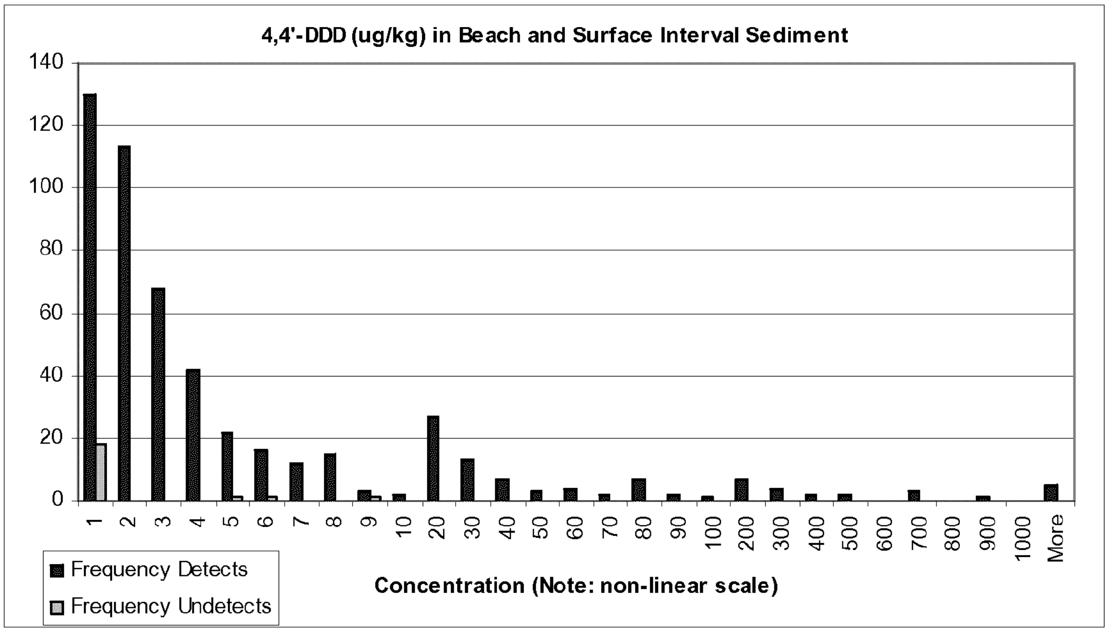

Figure 4-16a. Histogram of 4,4'-DDD Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

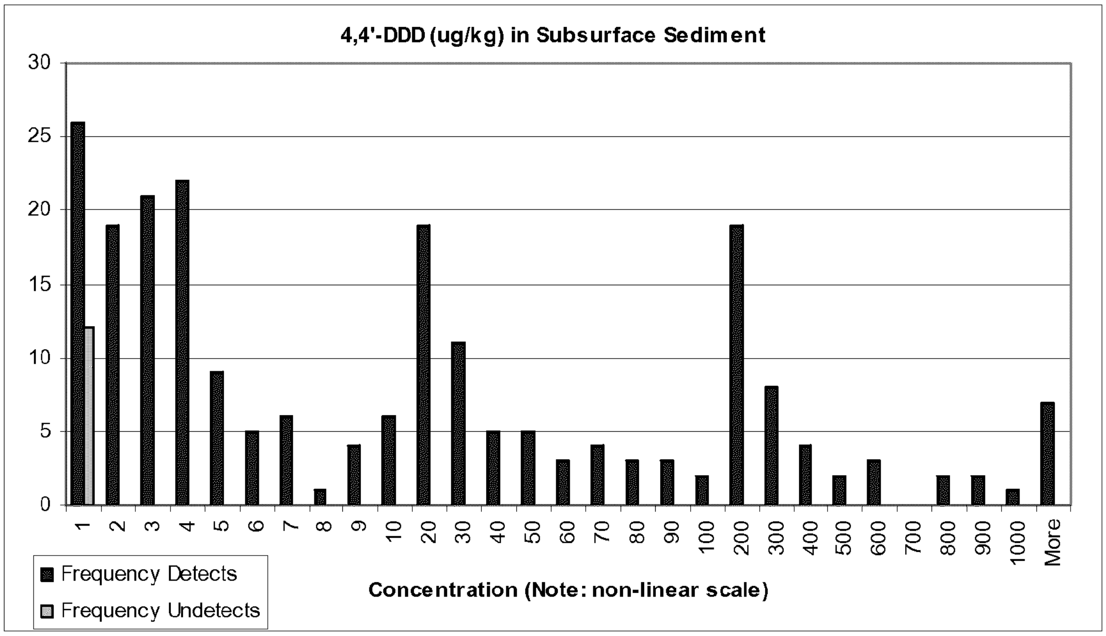

Figure 4-16b. Histogram of 4,4'-DDD Concentrations in Round 2A Subsurface Sediment Samples.

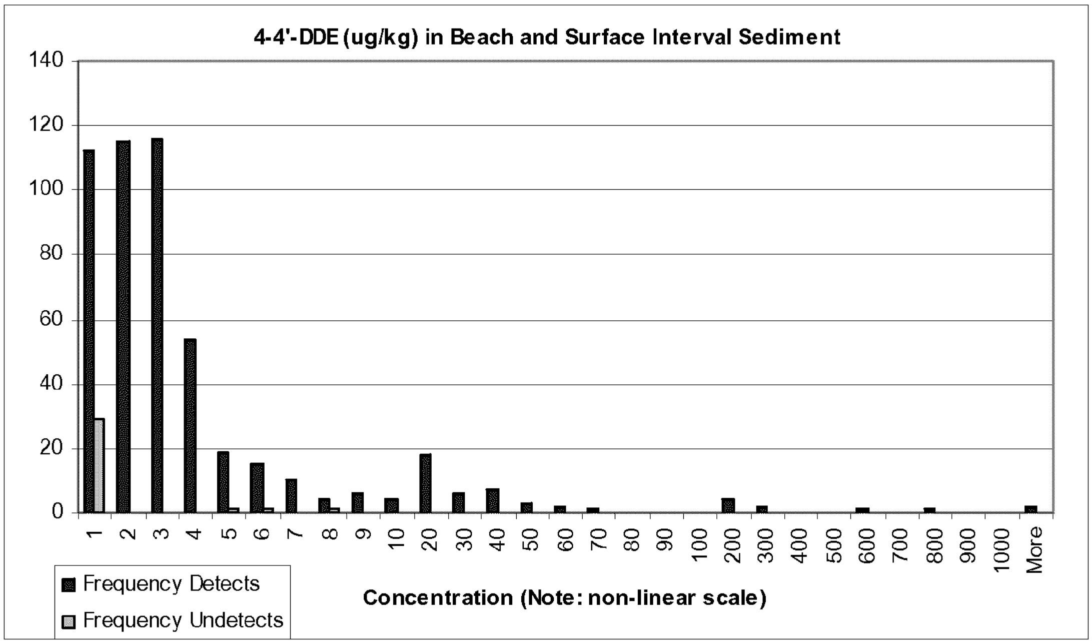

Figure 4-17a. Histogram of 4,4'-DDE Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

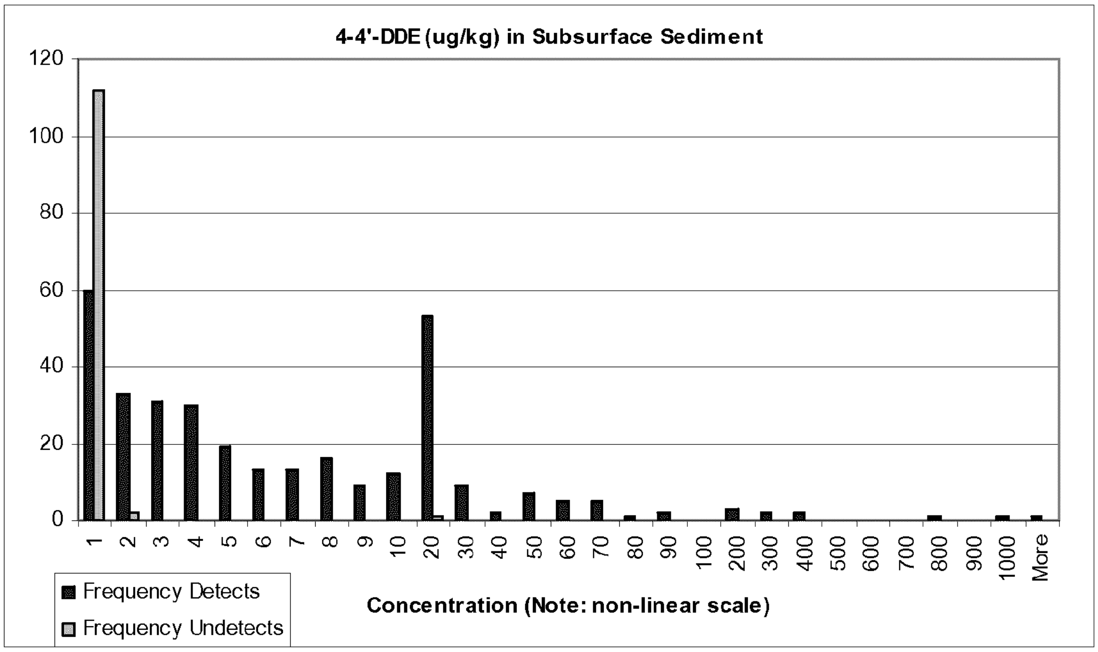

Figure 4-17b. Histogram of 4,4'-DDE Concentrations in Round 2A Subsurface Sediment Samples.

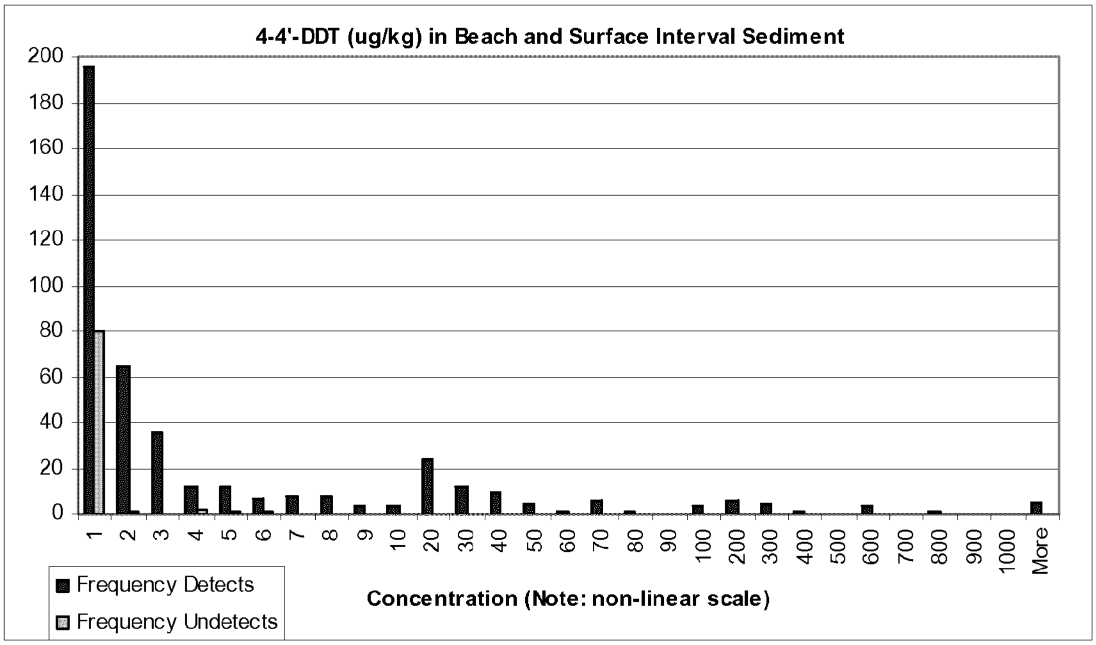

Figure 4-18a. Histogram of 4,4'-DDT Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

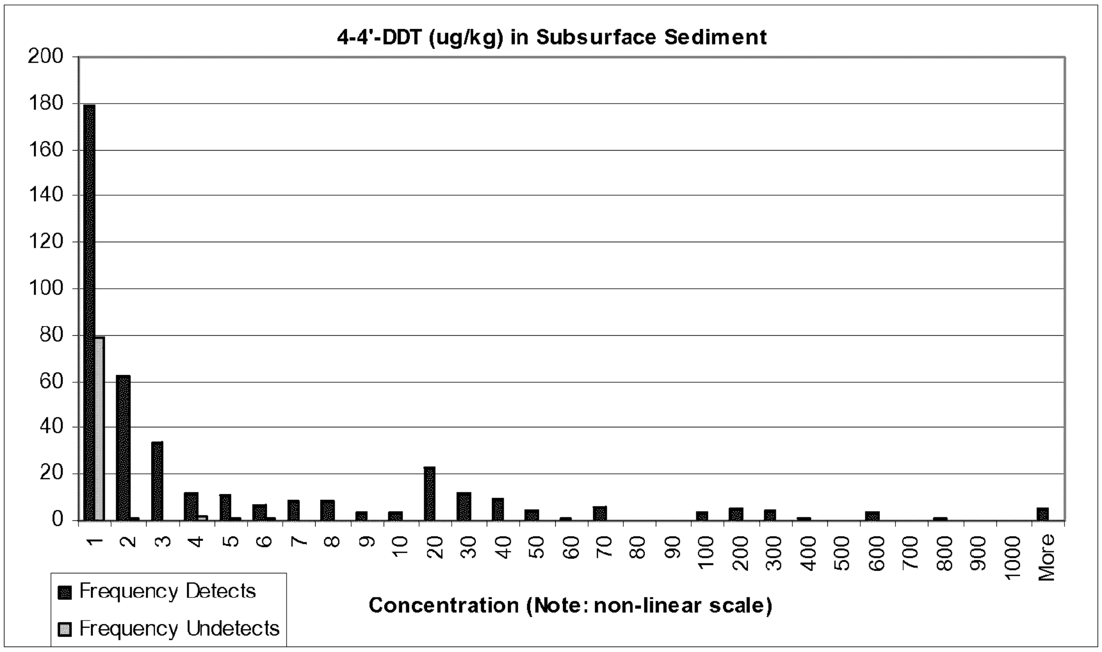

Figure 4-18b. Histogram of 4,4'-DDT Concentrations in Round 2A Subsurface Sediment Samples.

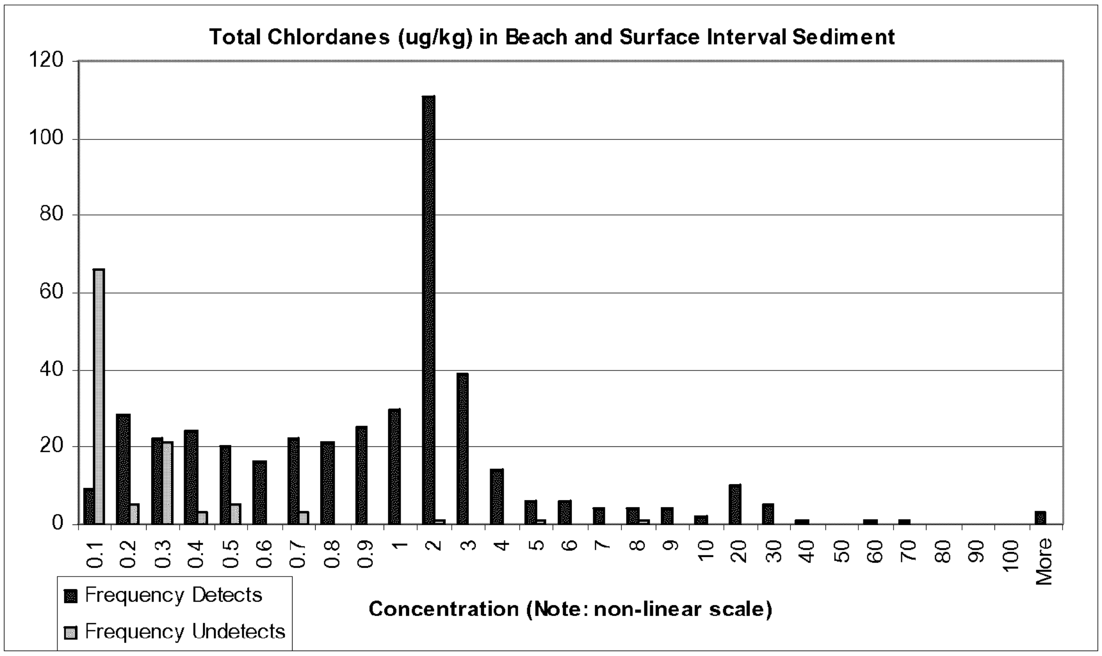

Figure 4-19a. Histogram of Total Chlordane Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

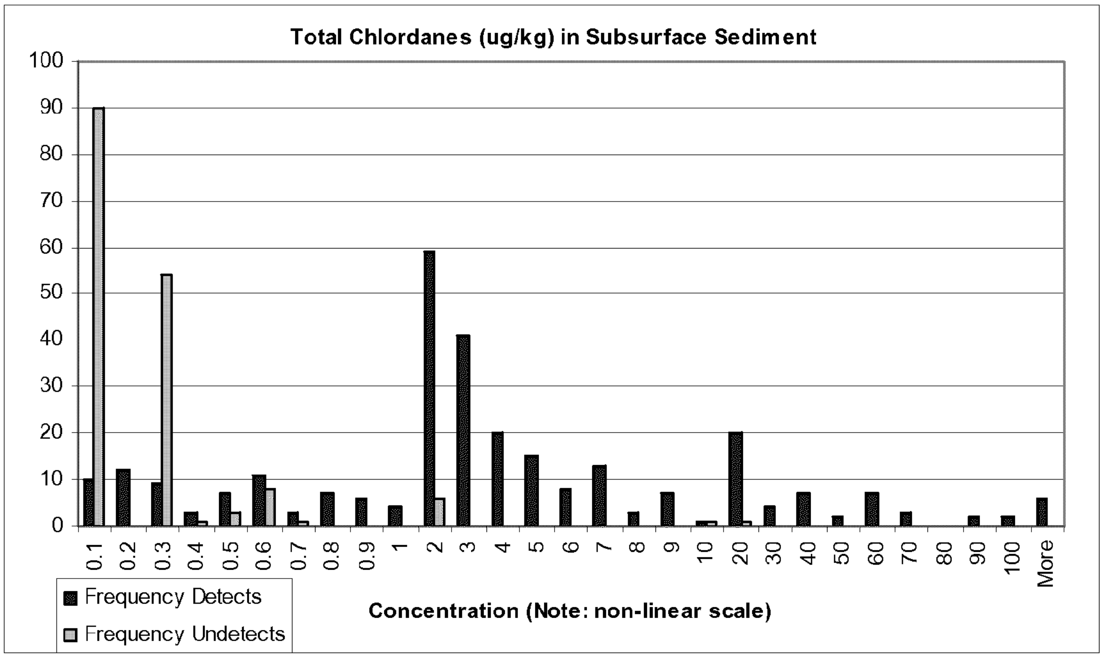

Figure 4-19b. Histogram of Total Chlordane Concentrations in Round 2A Subsurface Sediment Samples.

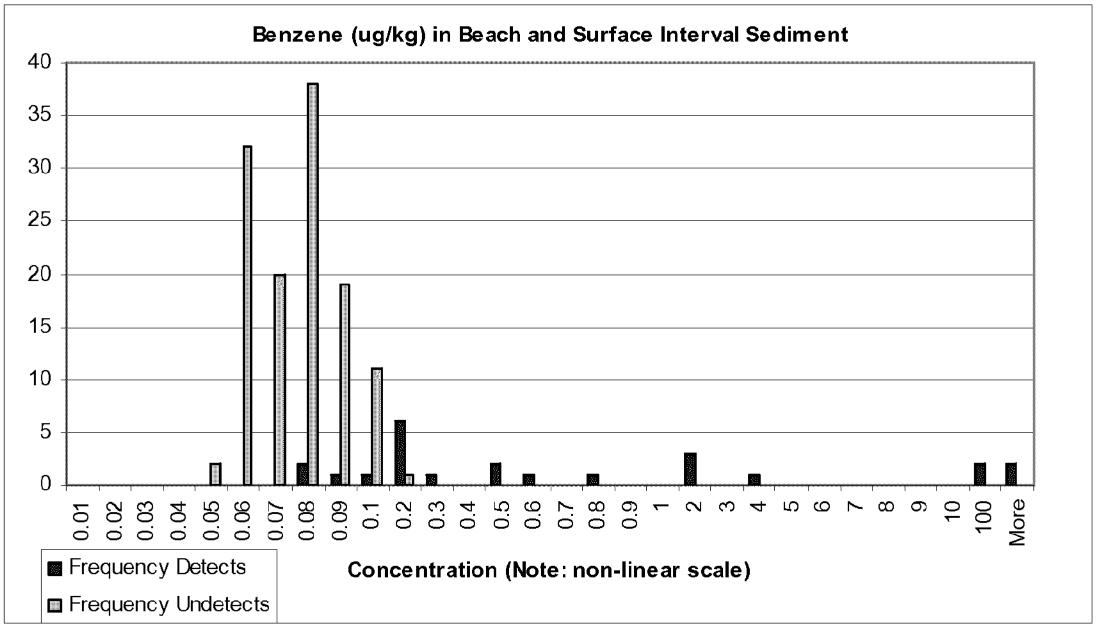

Figure 4-20a. Histogram of Benzene Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

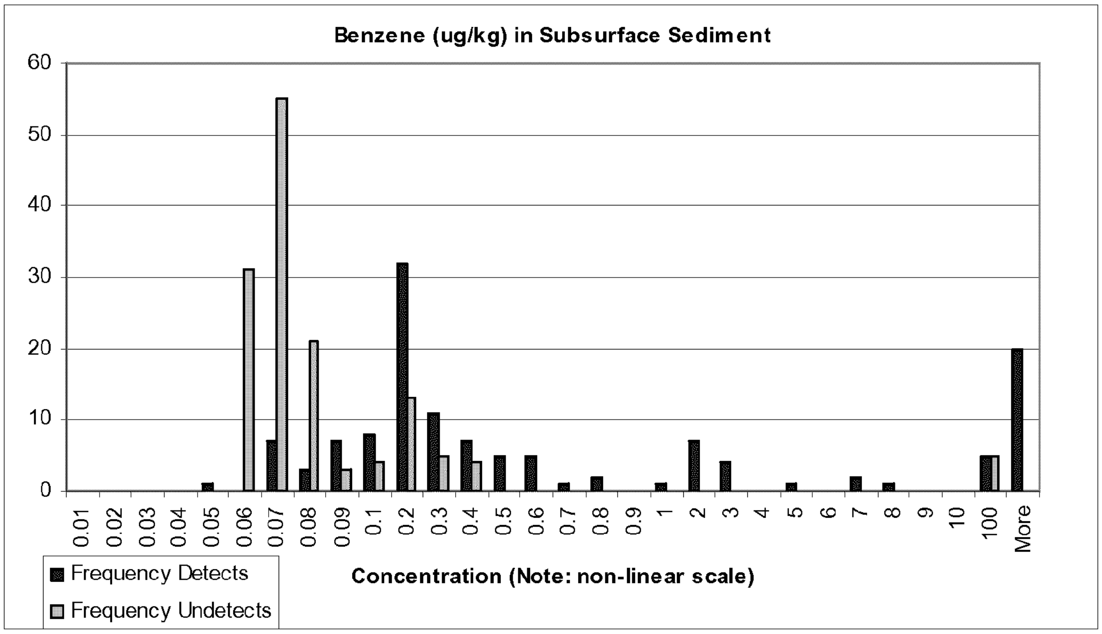

Figure 4-20b. Histogram of Benzene Concentrations in Round 2A Subsurface Sediment Samples.

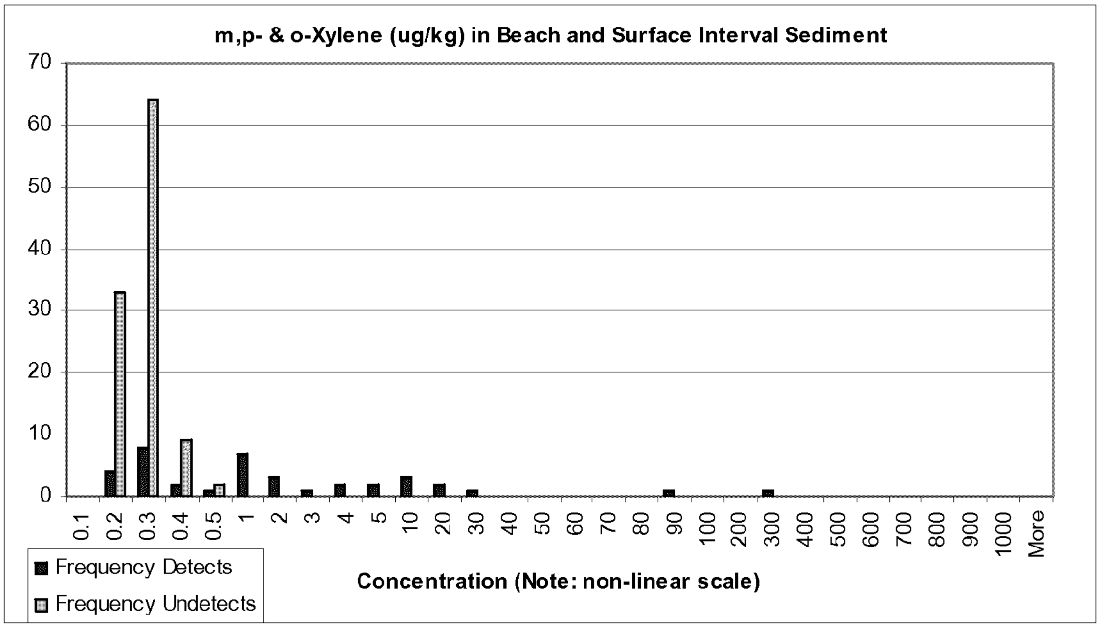

Figure 4-21a. Histogram of Total Xylenes Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

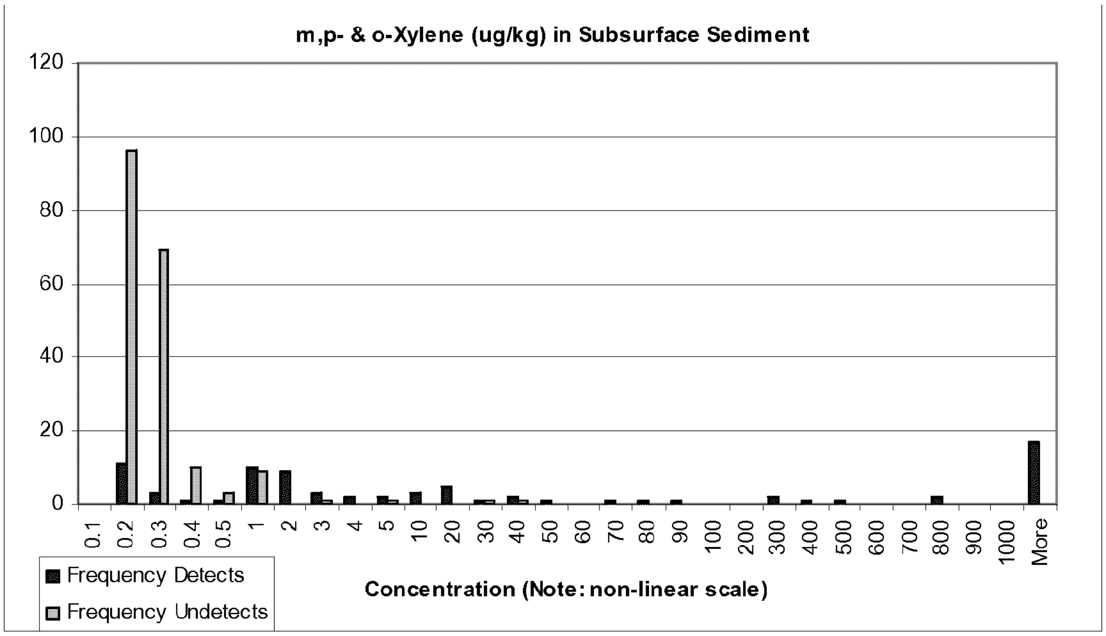

Figure 4-21b. Histogram of Total Xylenes Concentrations in Round 2A Subsurface Sediment Samples.

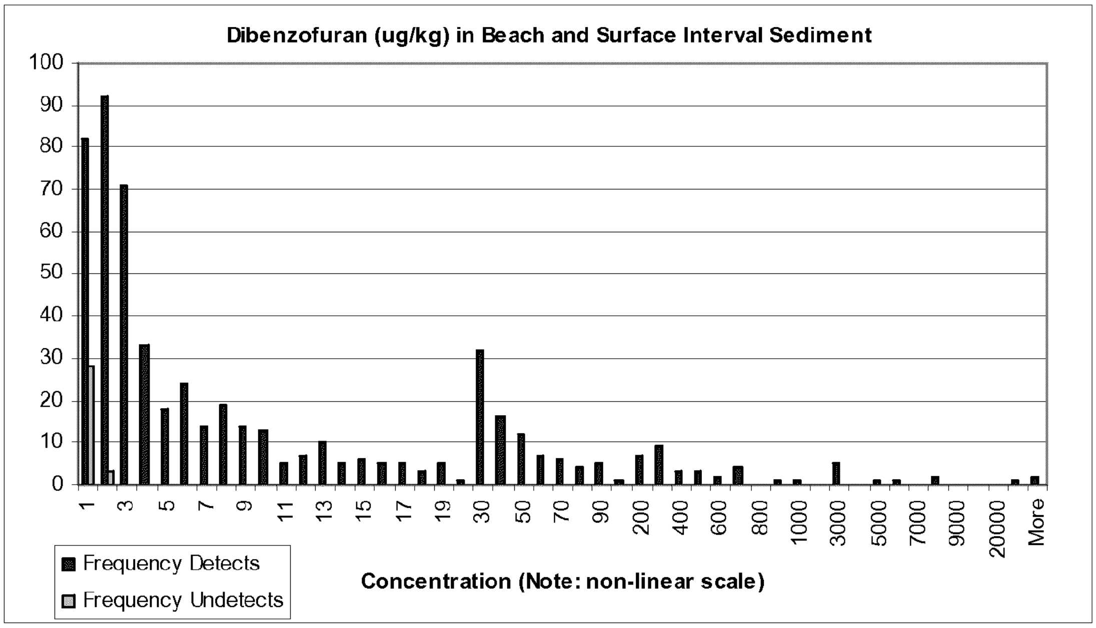

Figure 4-22a. Histogram of Dibenzofuran Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

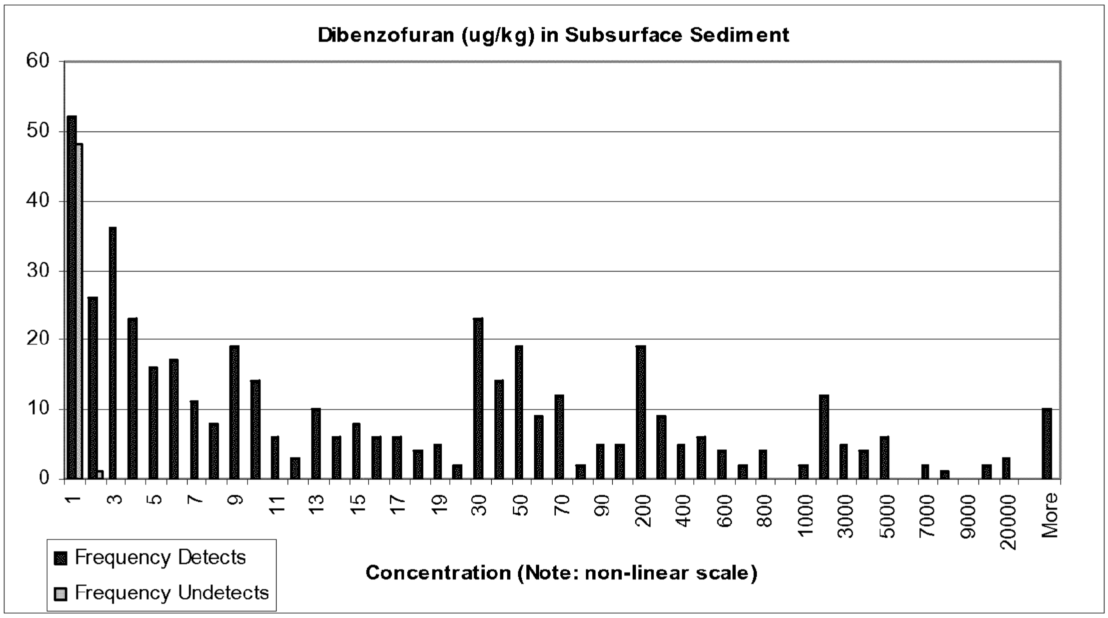

Figure 4-22b. Histogram of Dibenzofuran Concentrations in Round 2A Subsurface Sediment Samples.

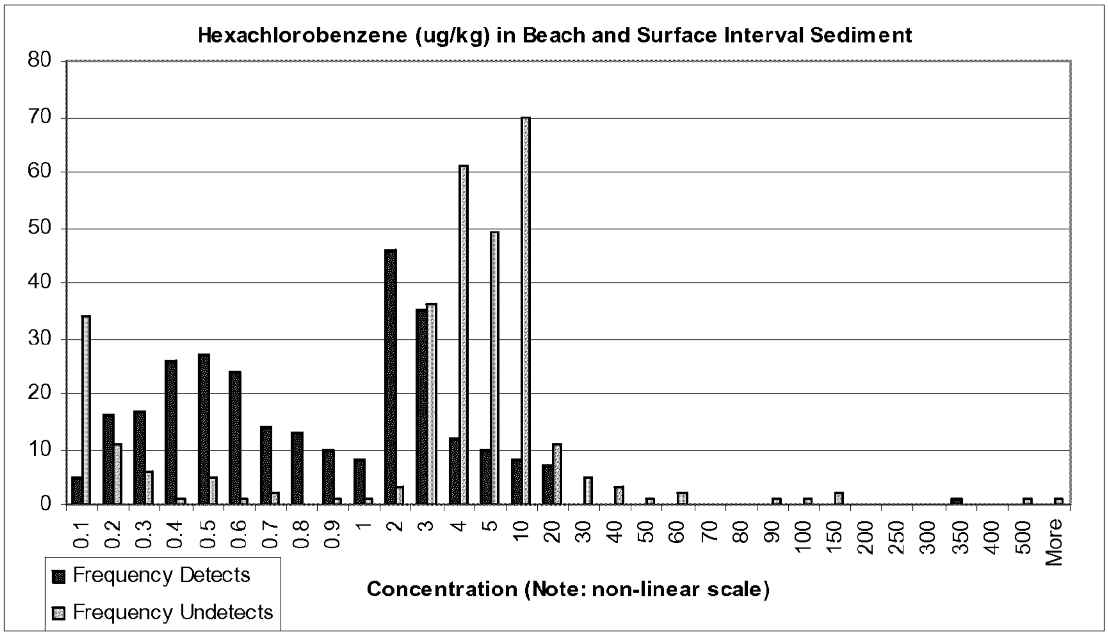

Figure 4-23a. Histogram of Hexachlorobenzene Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

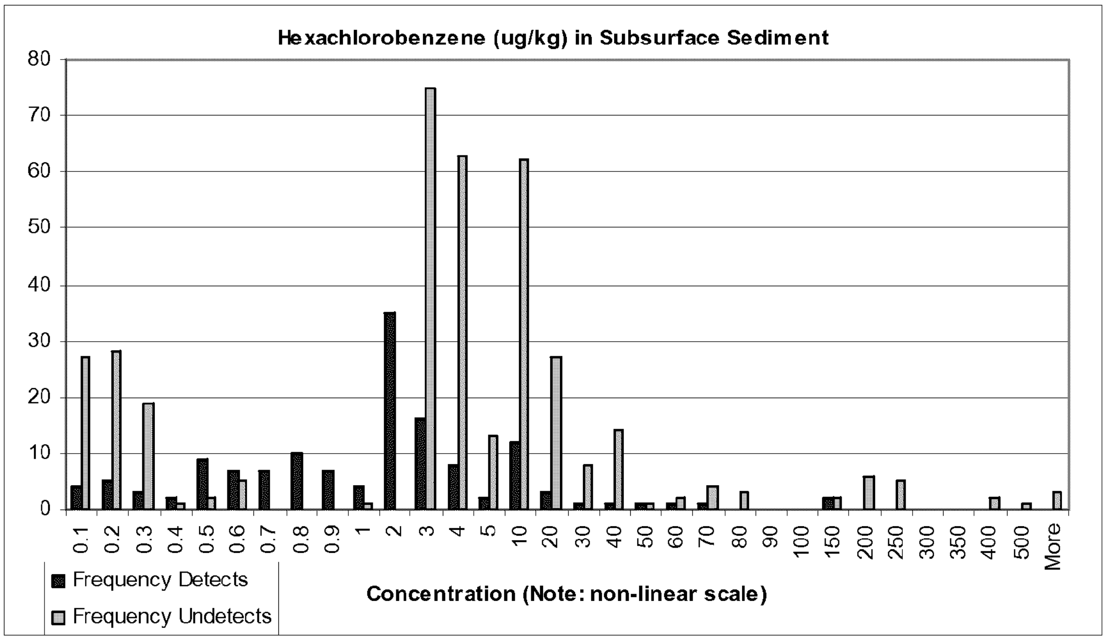

Figure 4-23b. Histogram of Hexachlorobenzene Concentrations in Round 2A Subsurface Sediment Samples.

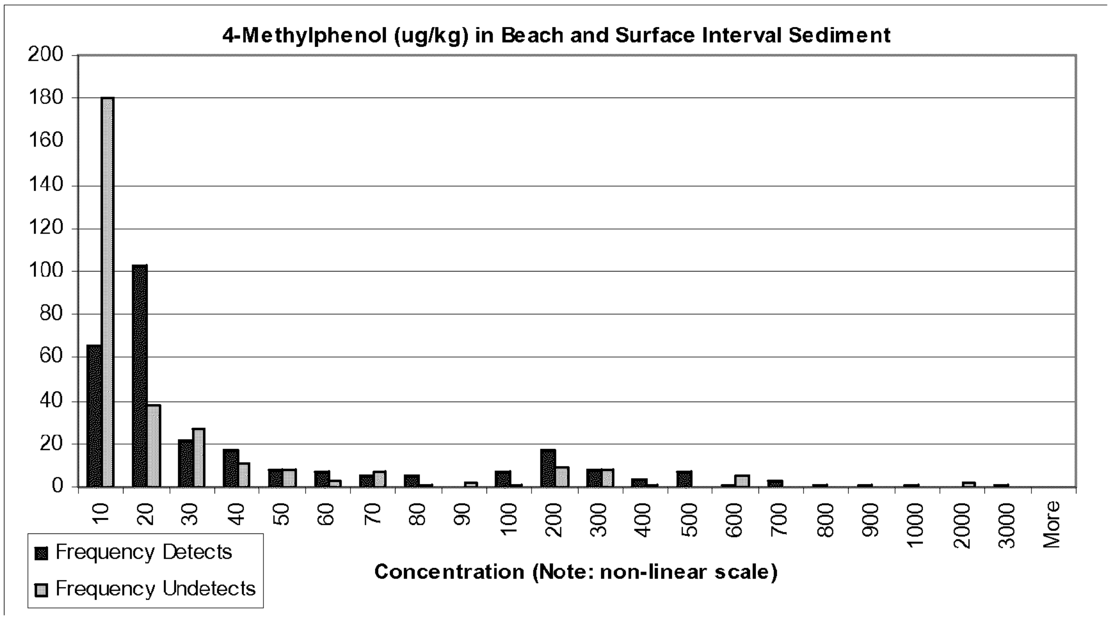

Figure 4-24a. Histogram of 4-Methylphenol Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

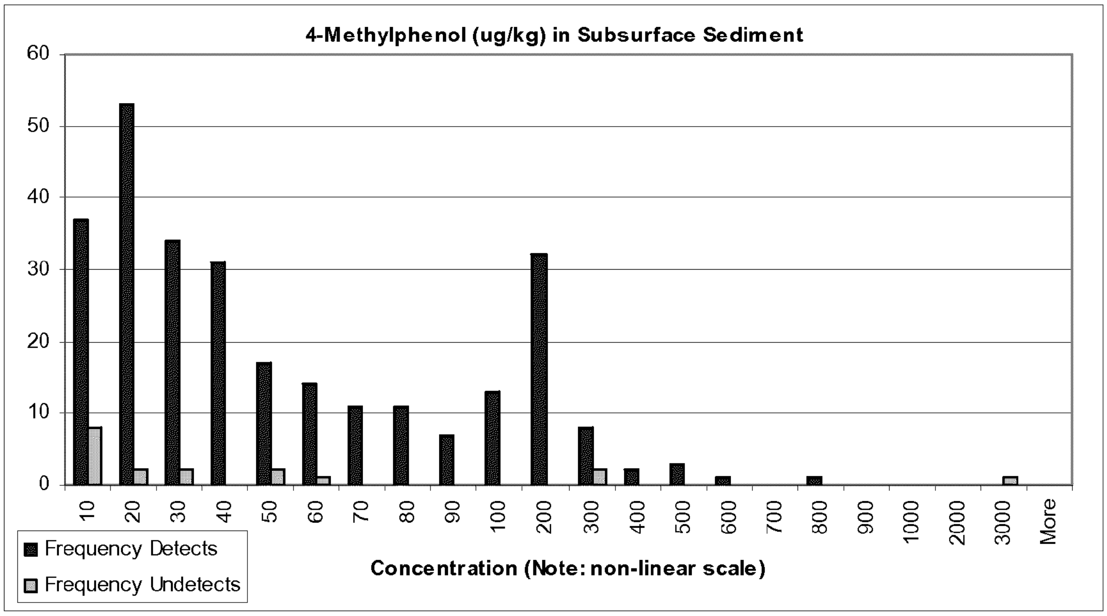

Figure 4-24b. Histogram of 4-Methylphenol Concentrations in Round 2A Subsurface Sediment Samples.

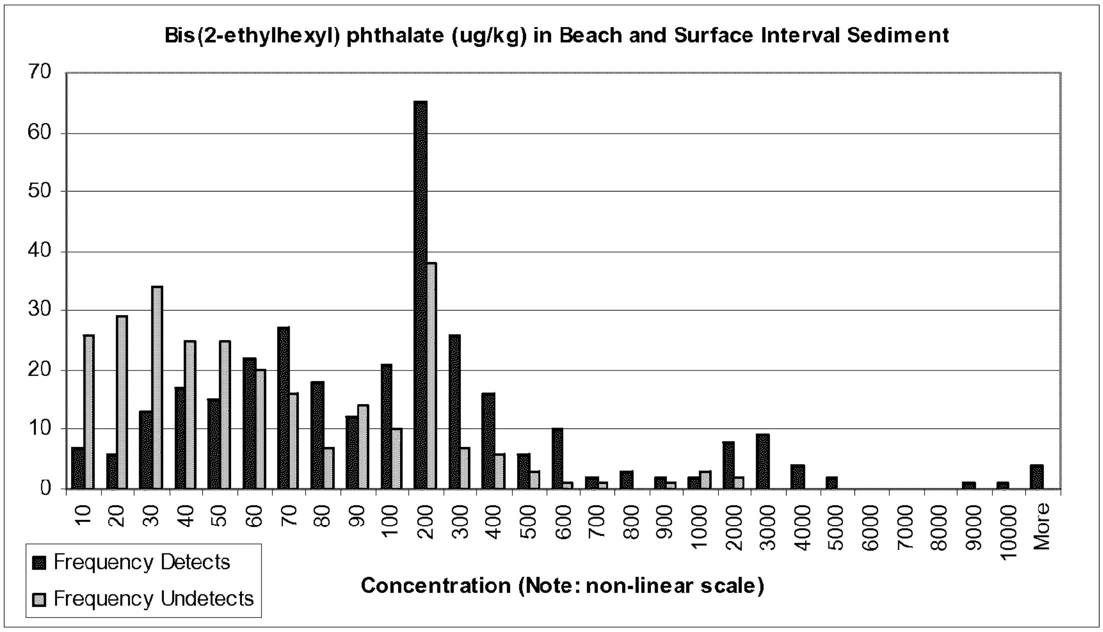

Figure 4-25a. Histogram of Bis(2-ethylhexyl) phthalate Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

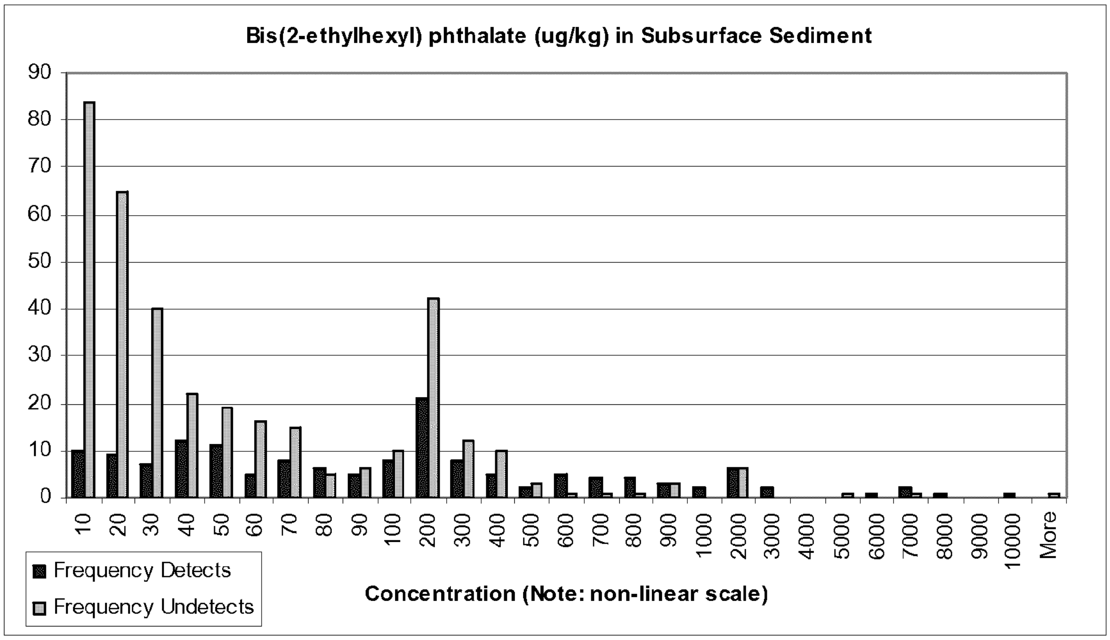

Figure 4-25b. Histogram of Bis(2-ethylhexyl) phthalate Concentrations in Round 2A Subsurface Sediment Samples.

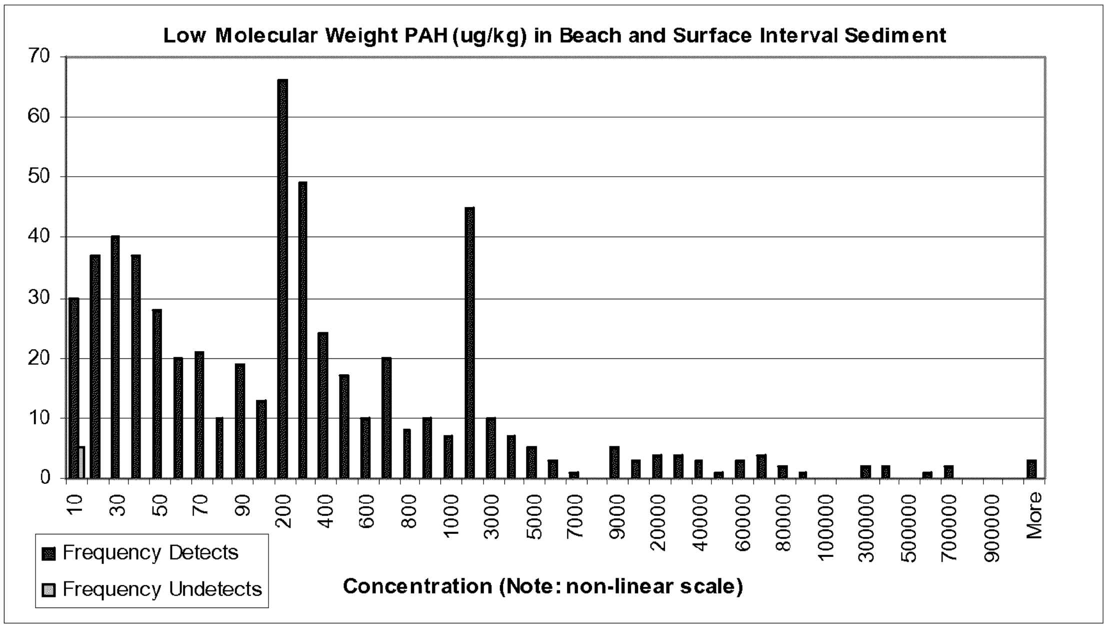

Figure 4-26a. Histogram of Low Molecular Weight PAH Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

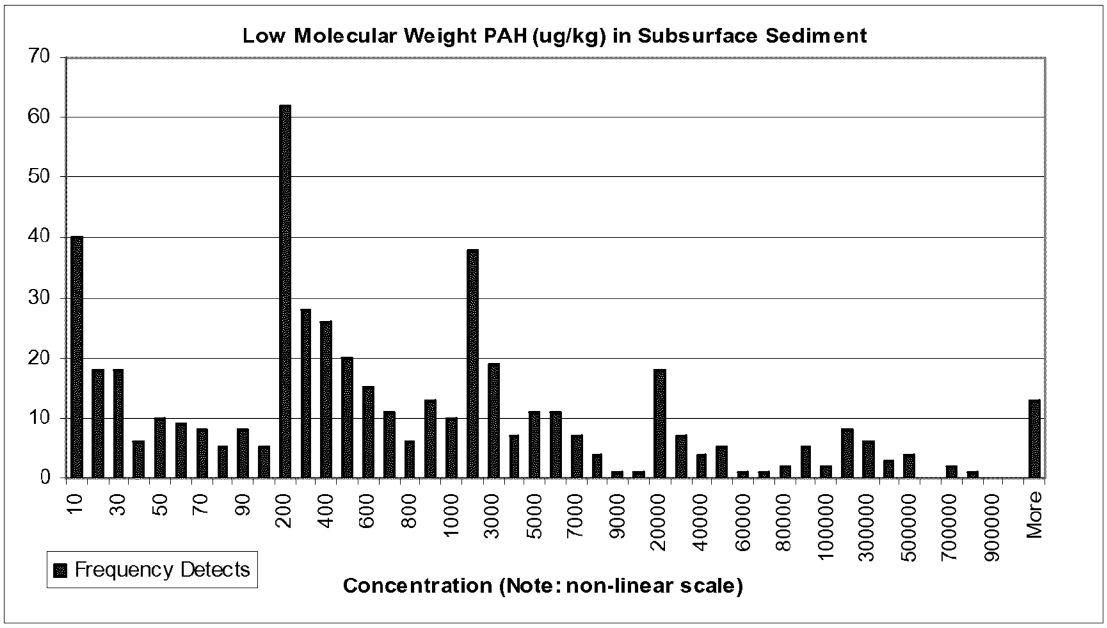

Figure 4-26b. Histogram of Low Molecular Weight PAH Concentrations in Round 2A Subsurface Sediment Samples.

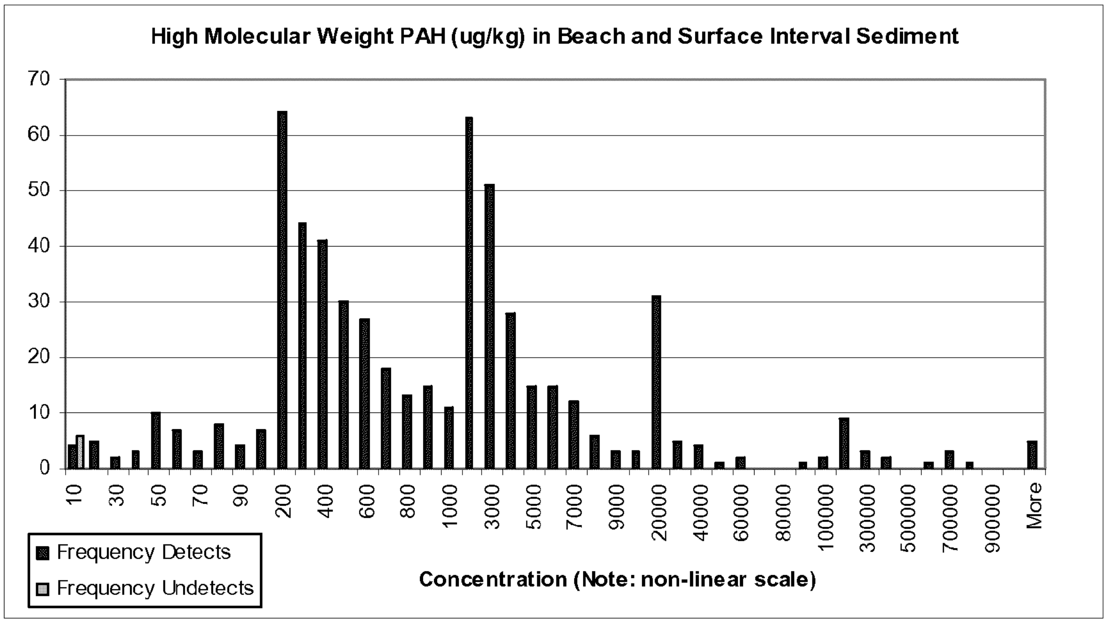

Figure 4-27a. Histogram of High Molecular Weight PAH Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

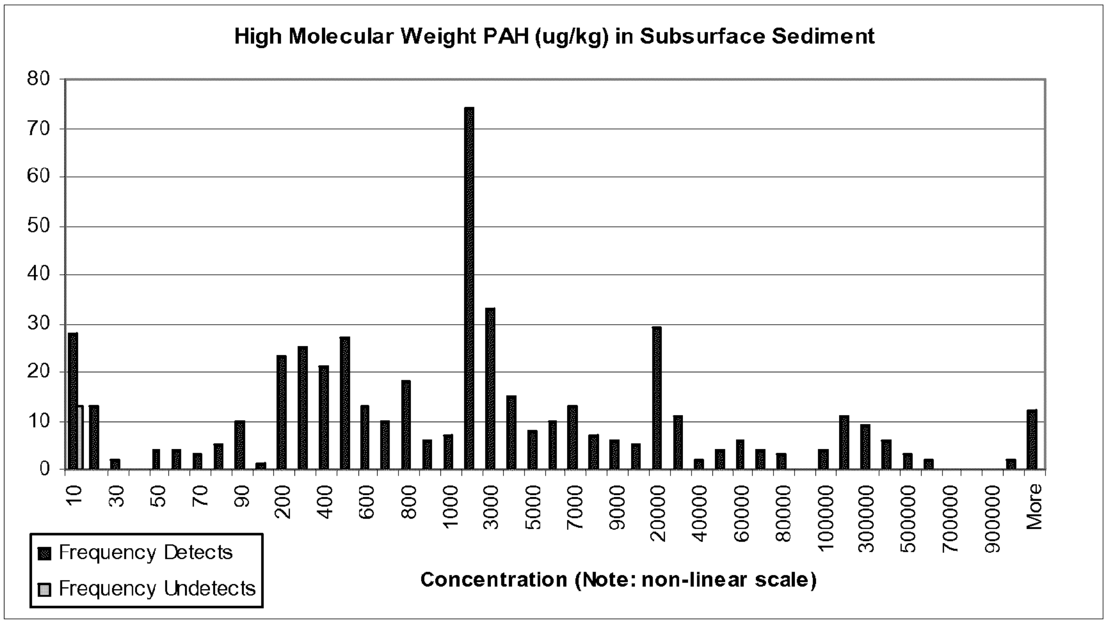

Figure 4-27b. Histogram of High Molecular Weight PAH Concentrations in Round 2A Subsurface Sediment Samples.

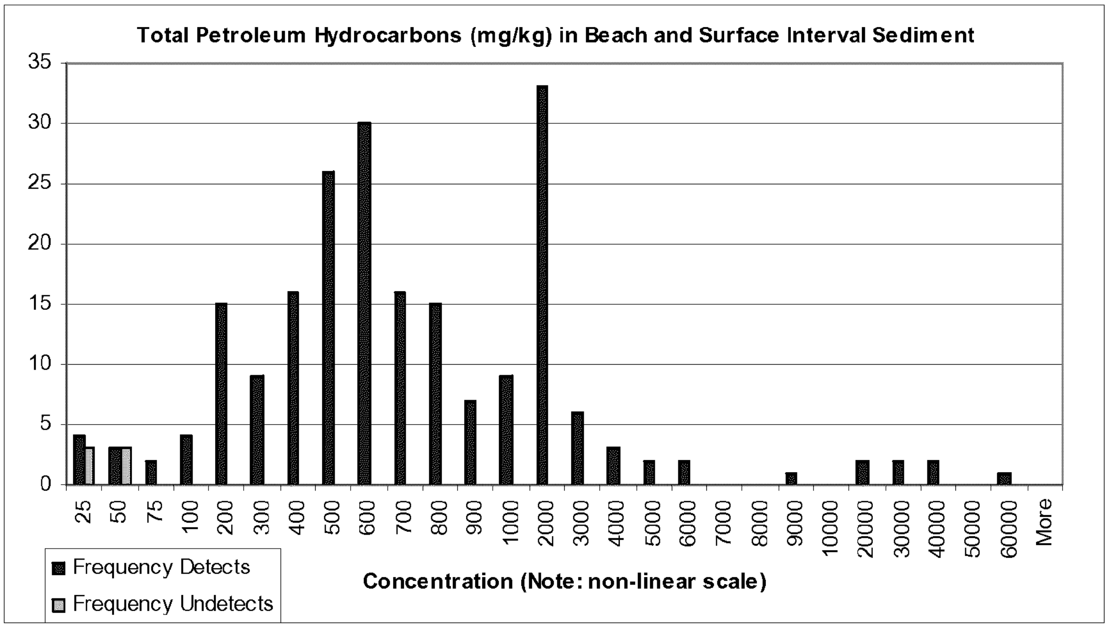

Figure 4-28a. Histogram of Total TPH Concentrations in Round 2A Beach and Surface Interval Sediment Samples.

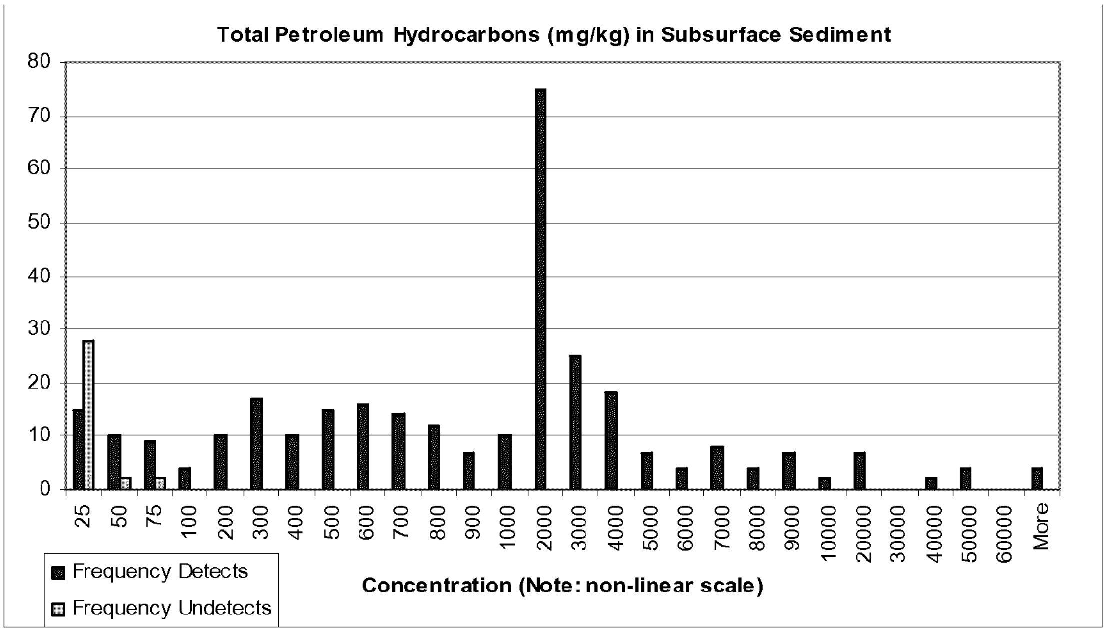

Figure 4-28b. Histogram of Total TPH Concentrations in Round 2A Subsurface Sediment Samples.

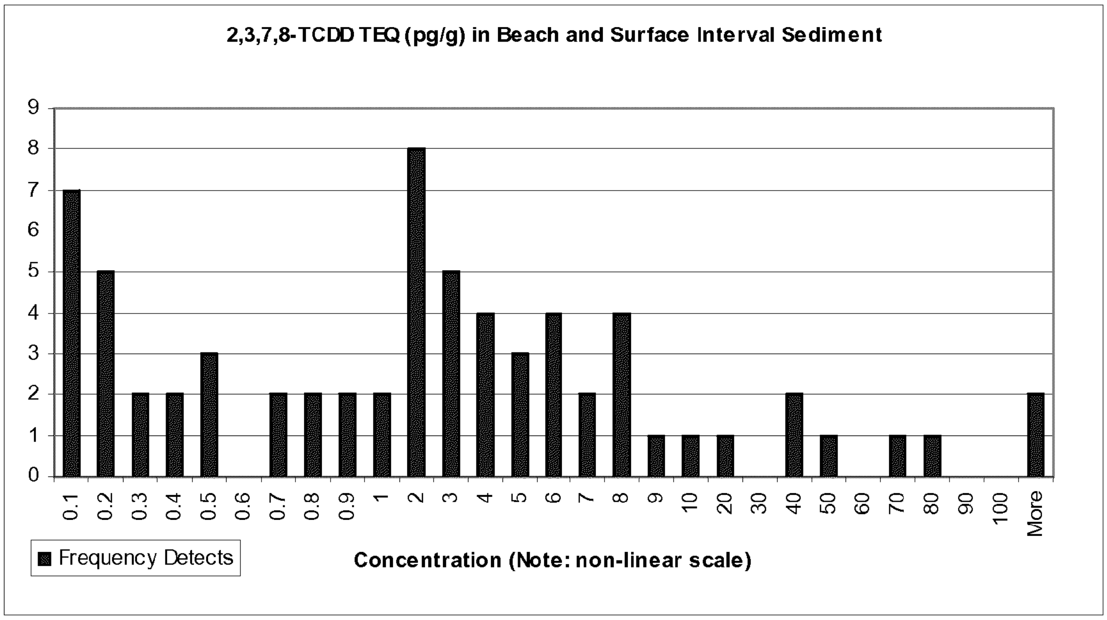

Figure 4-29a. Histogram of 2, 3, 7, 8 – TCDD TEQ Values in Round 2A Beach and Surface Interval Sediment Samples.

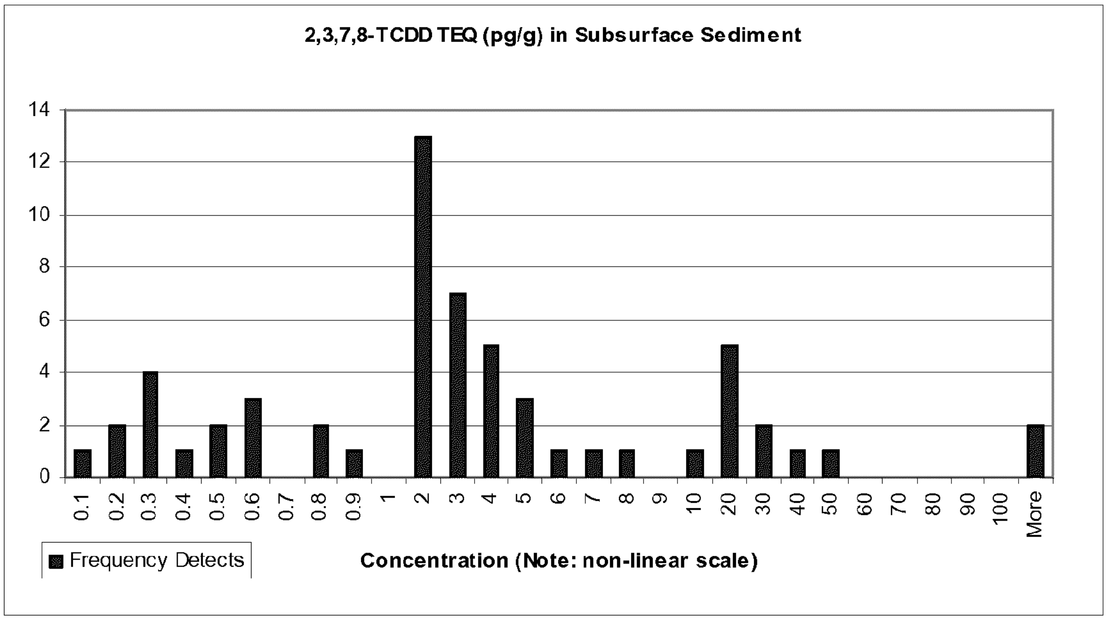

Figure 4-29b. Histogram of 2, 3, 7, 8 – TCDD TEQ Values in Round 2A Subsurface Sediment Samples.

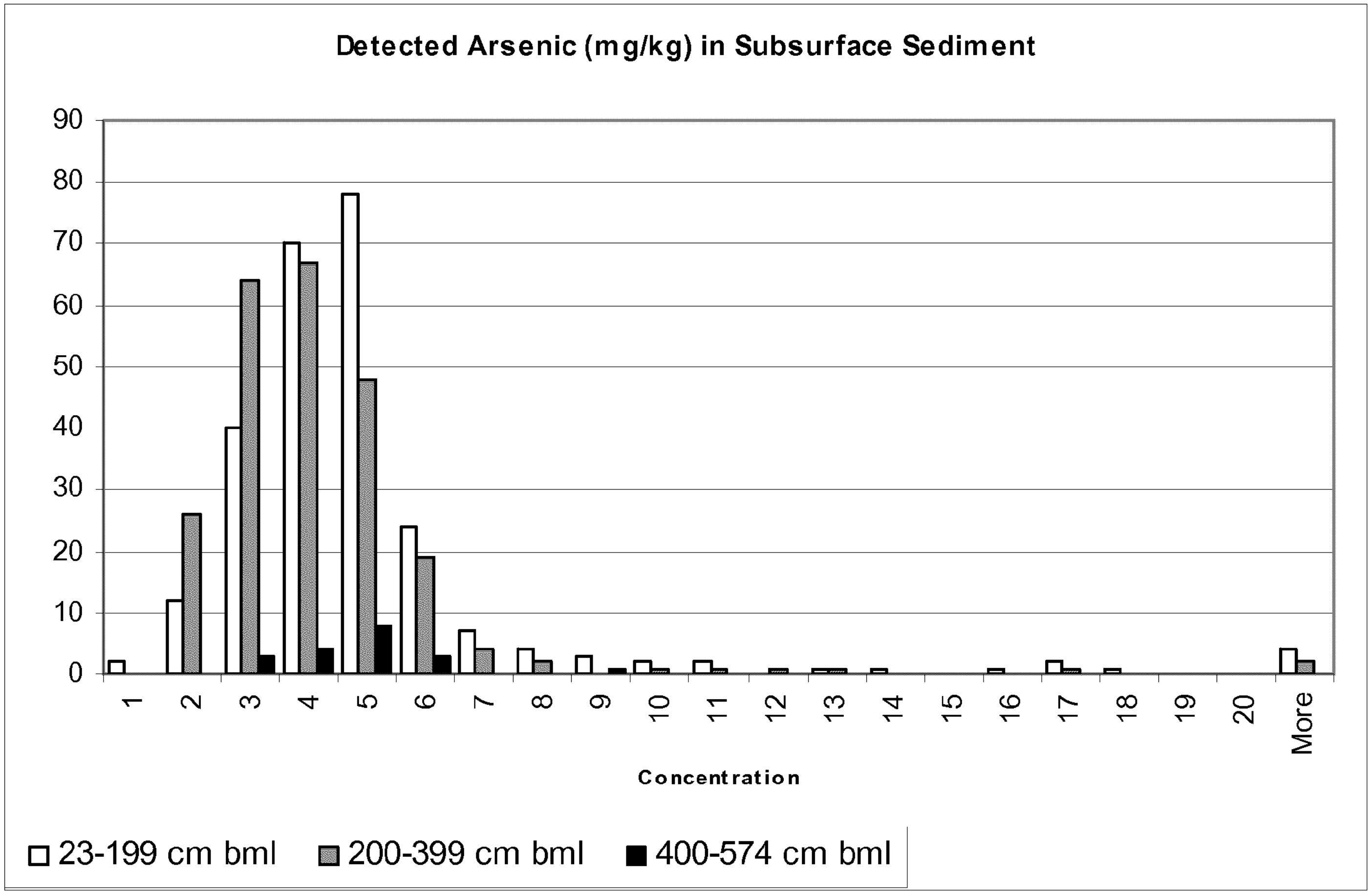

Figure 4-30. Histogram of Detected Arsenic Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

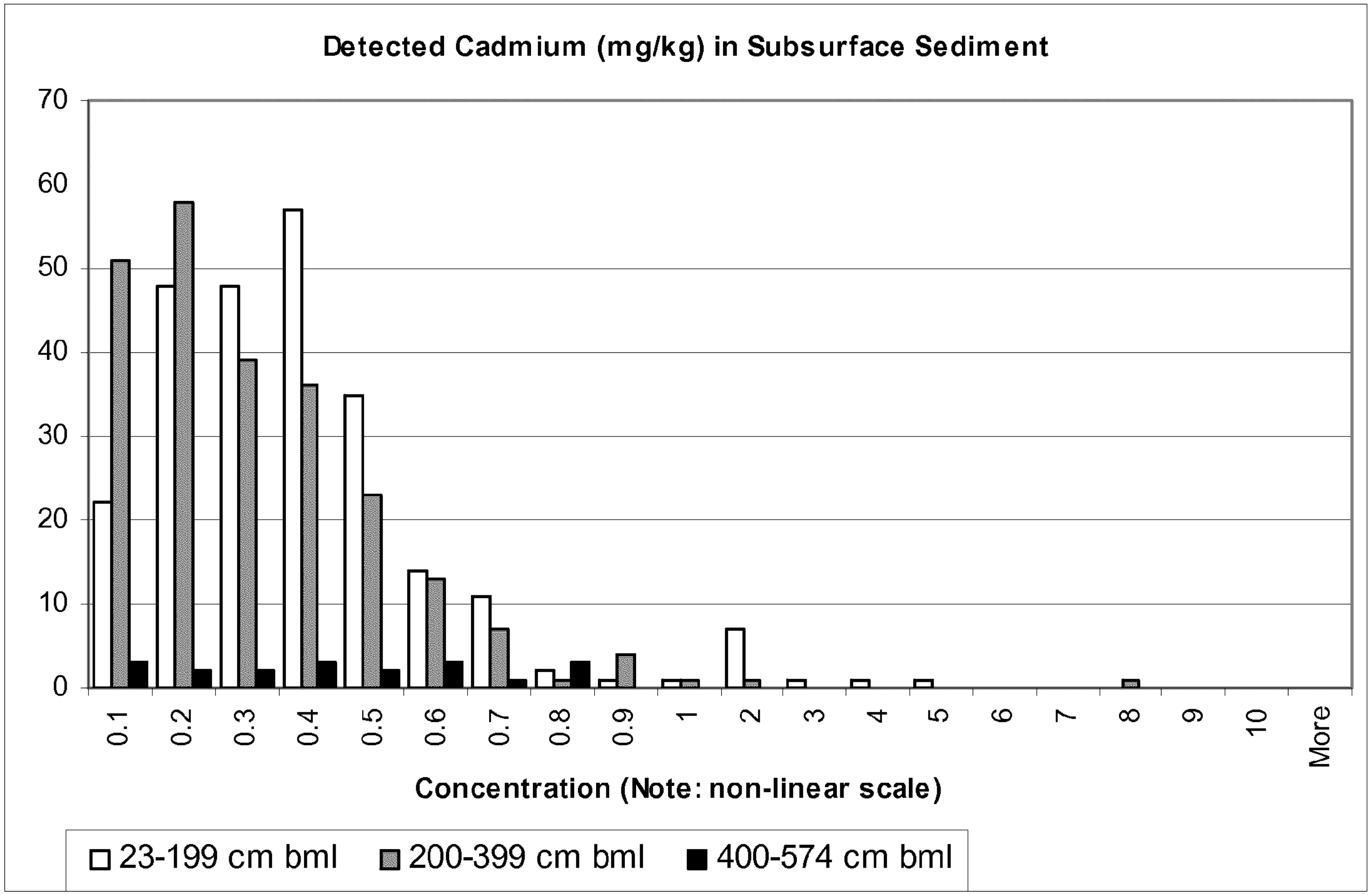

Figure 4-31. Histogram of Detected Cadmium Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

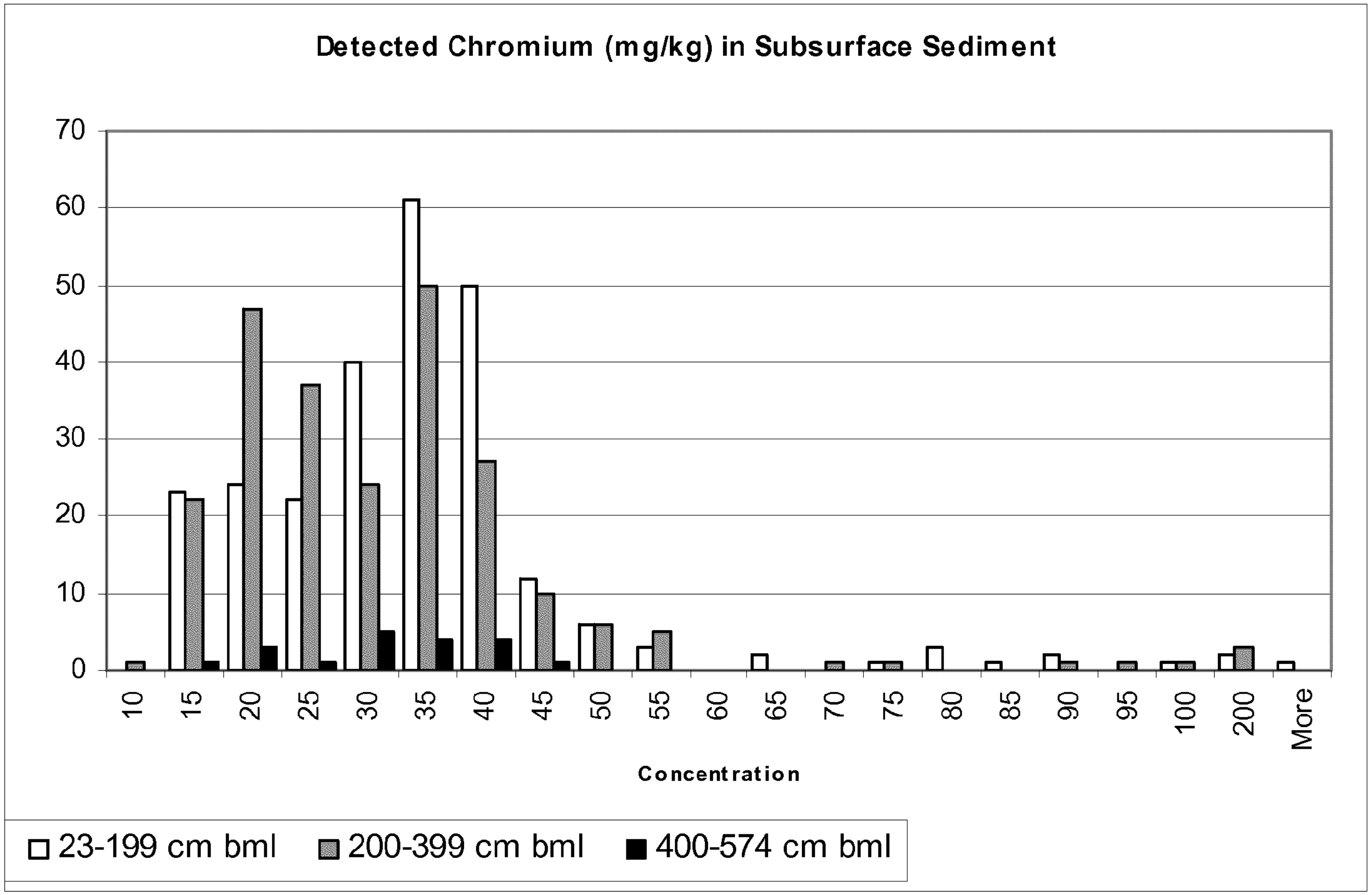

Figure 4-32. Histogram of Detected Chromium Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

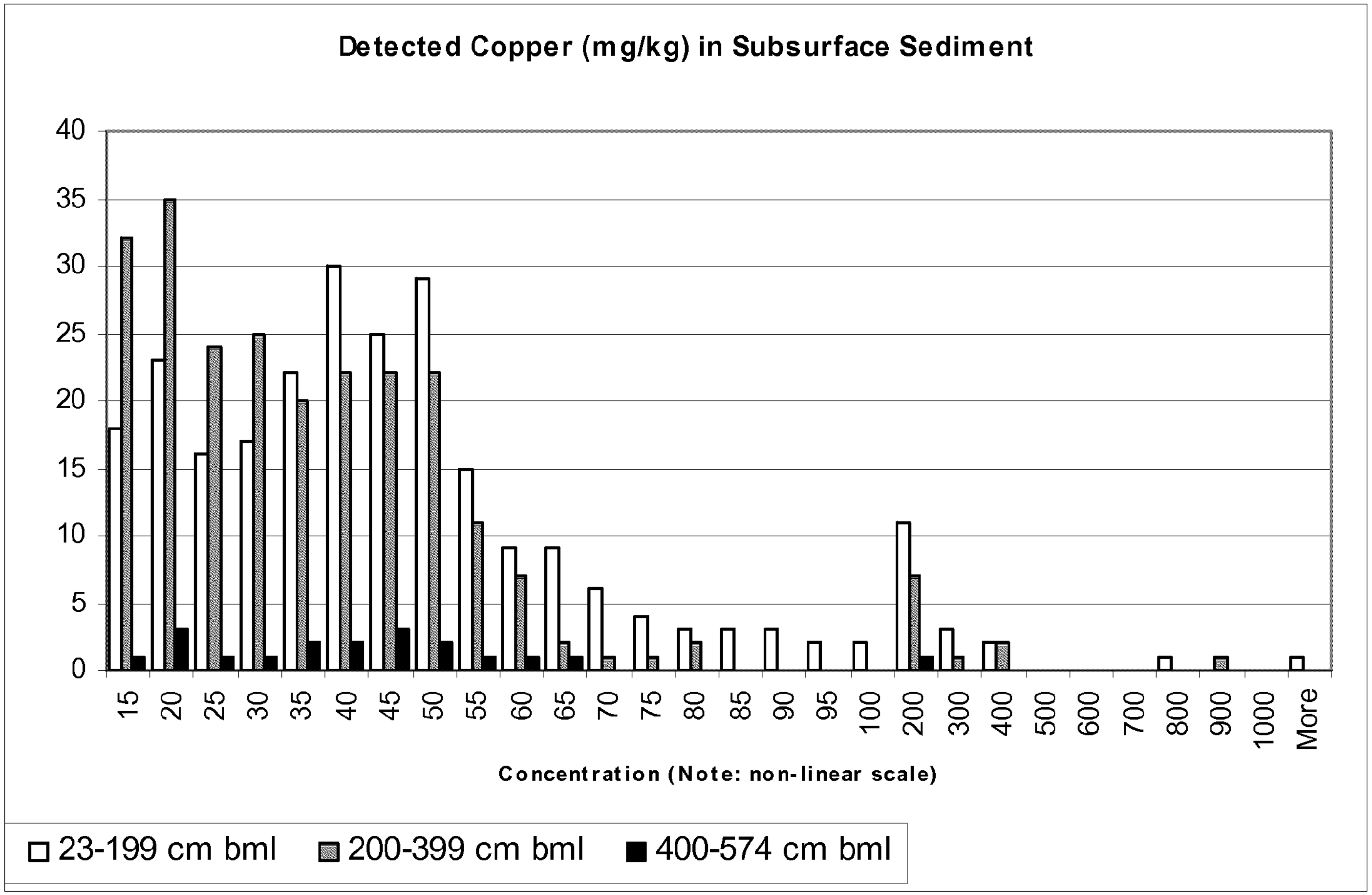

Figure 4-33. Histogram of Detected Copper Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

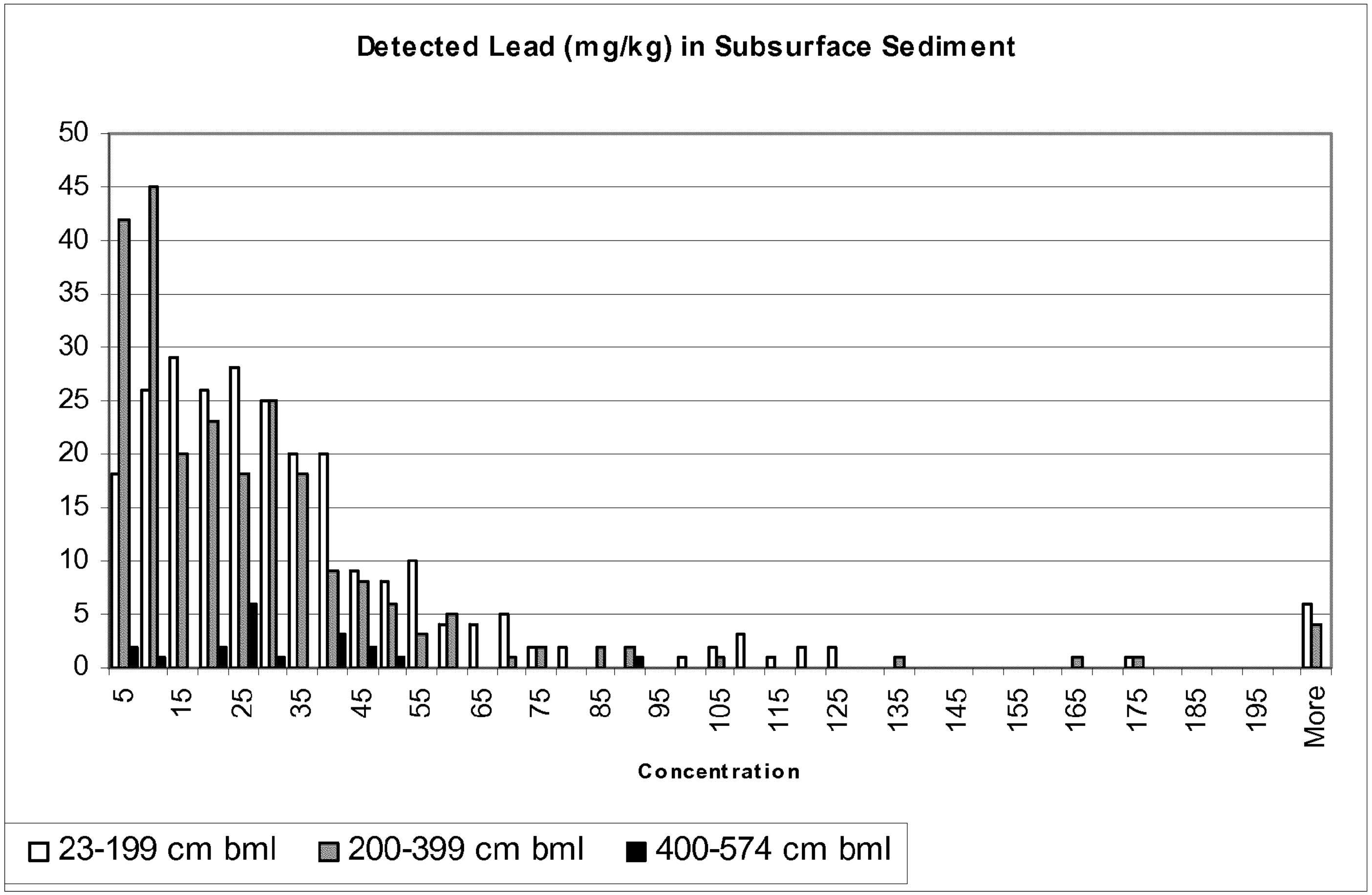

Figure 4-34. Histogram of Detected Lead Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

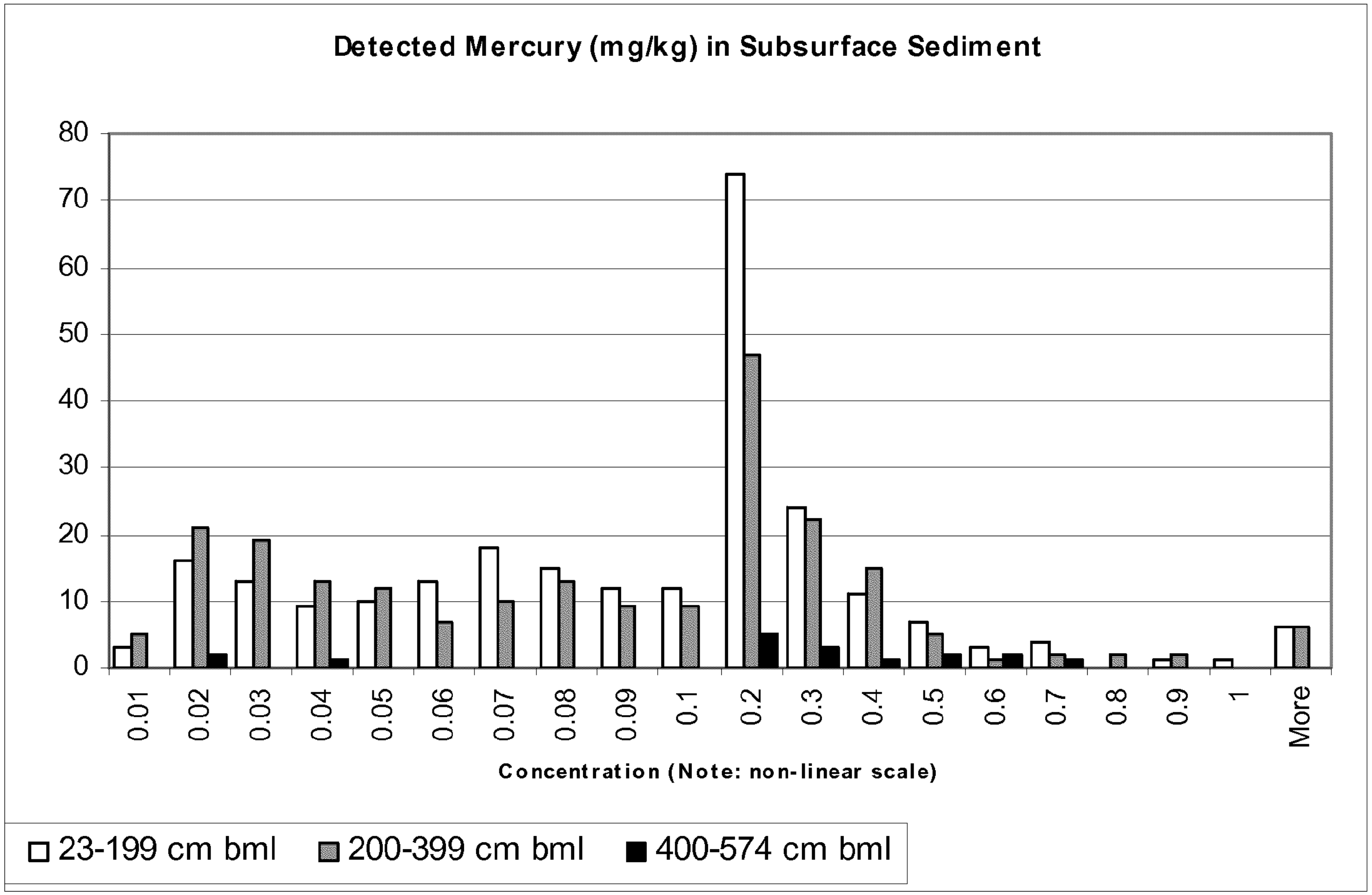

Figure 4-35. Histogram of Detected Mercury Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

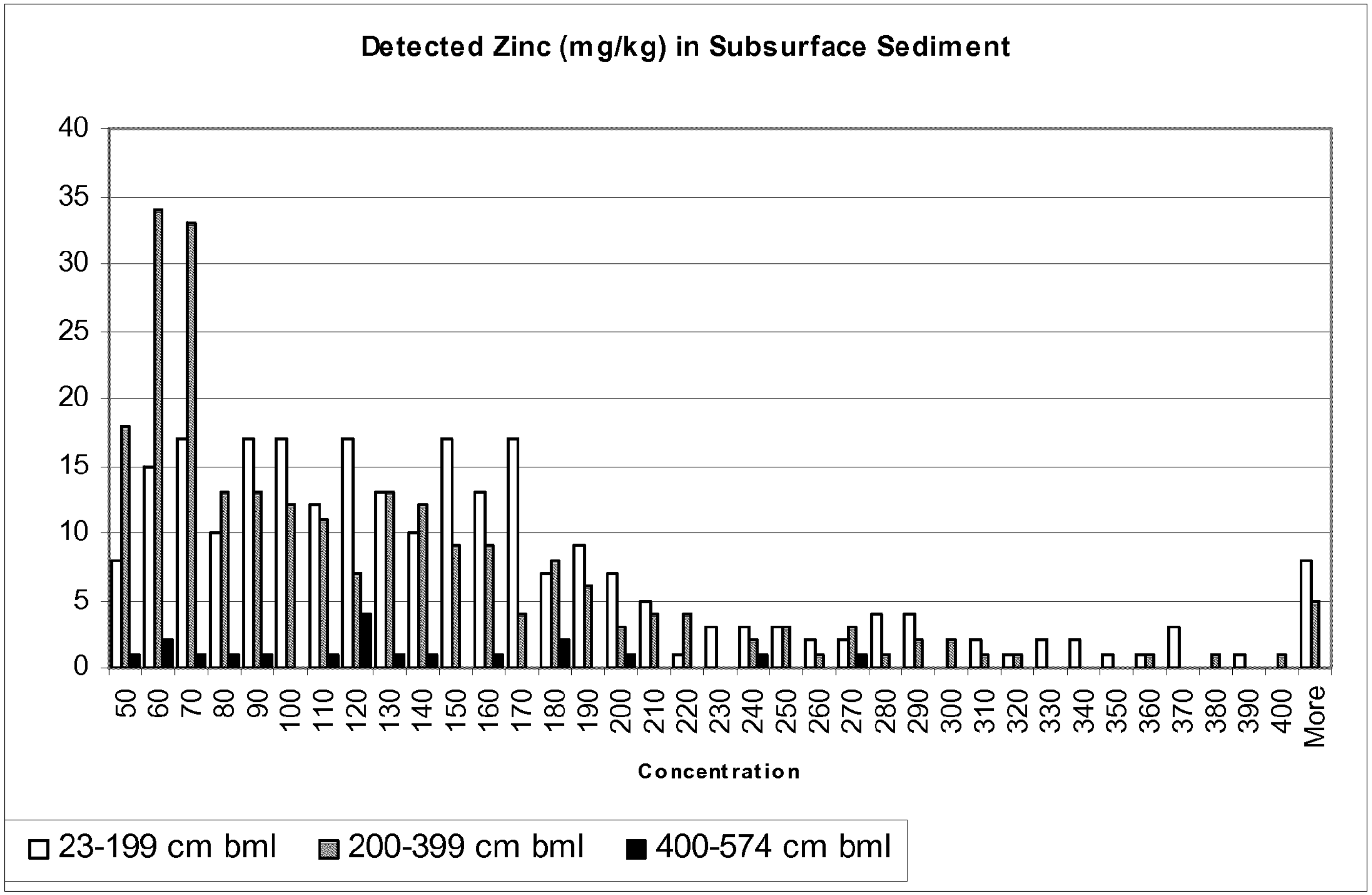

Figure 4-36. Histogram of Detected Zinc Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

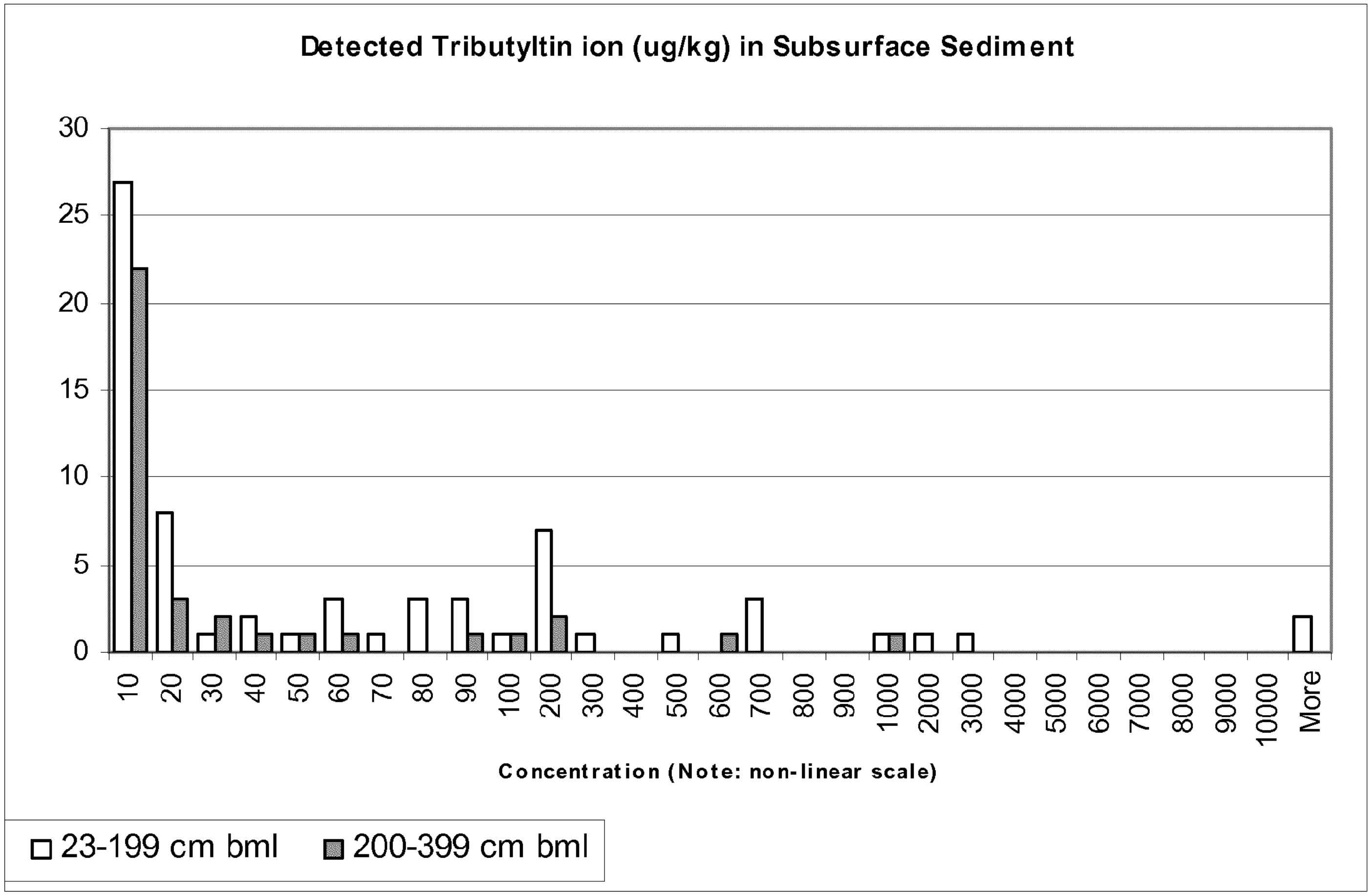

Figure 4-37. Histogram of Detected TBT Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

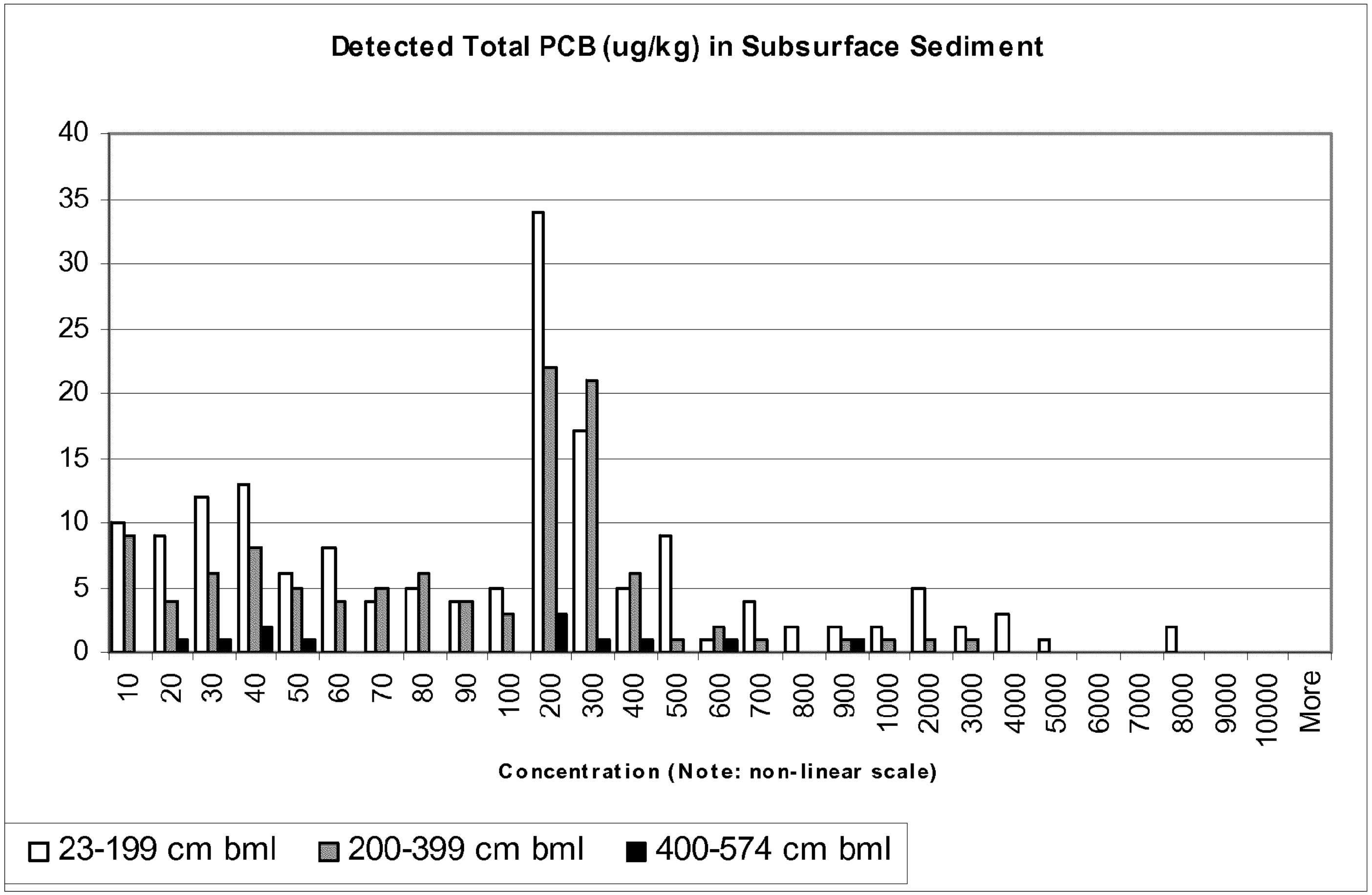

Figure 4-38. Histogram of Detected Total PCB Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

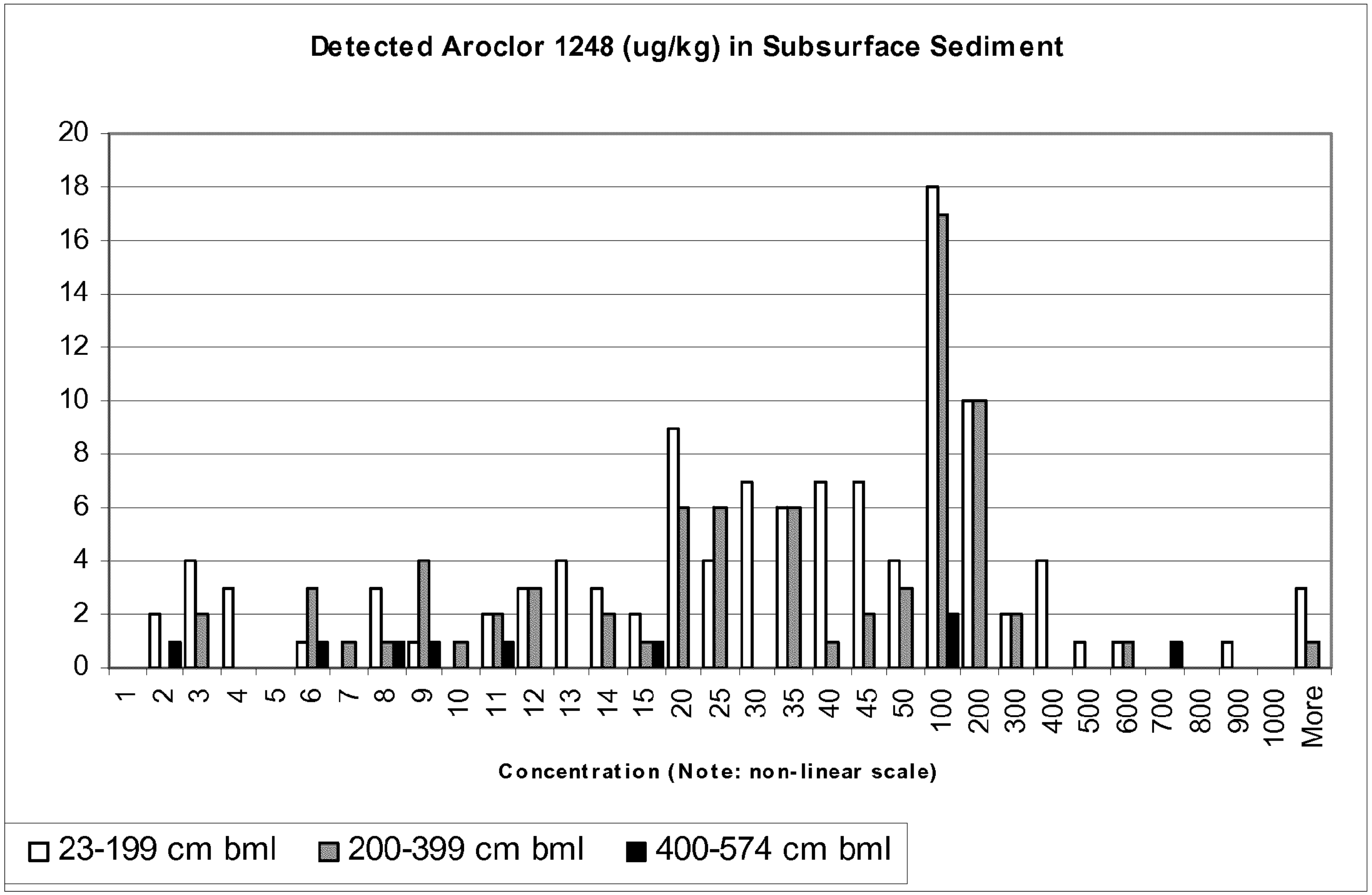

Figure 4-39. Histogram of Detected Aroclor 1248 Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

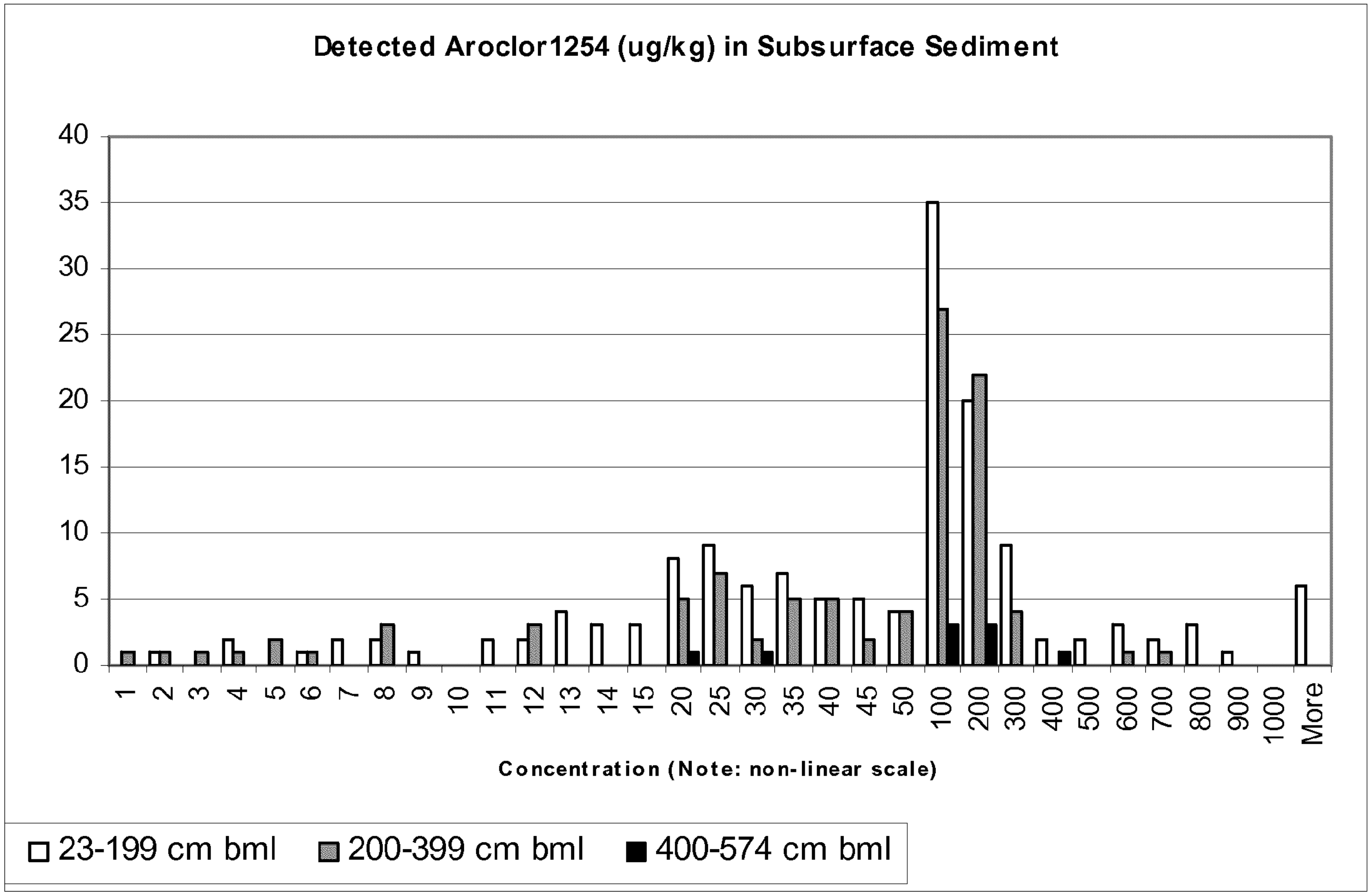

Figure 4-40. Histogram of Detected Aroclor 1254 Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

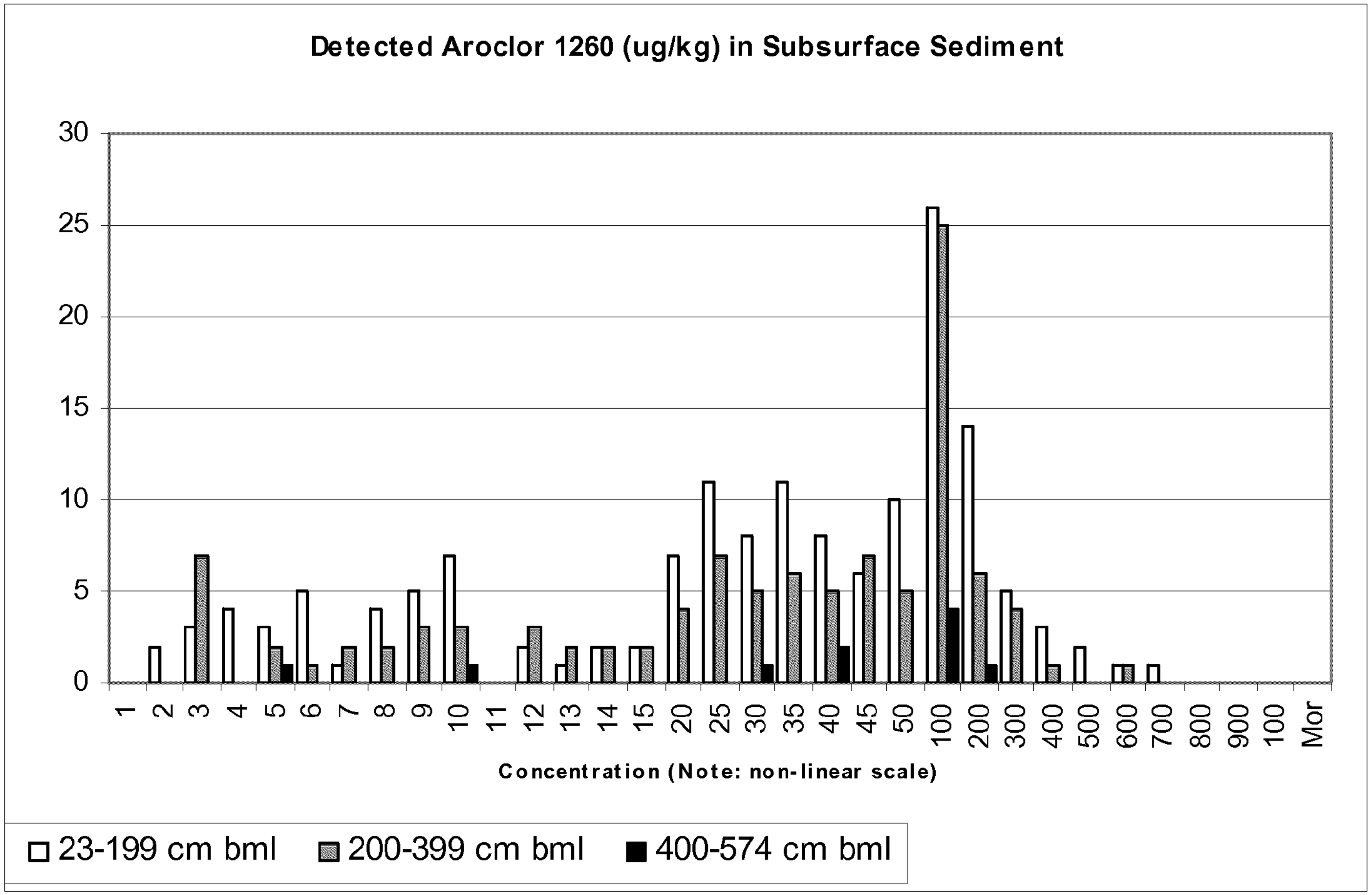

Figure 4-41. Histogram of Detected Aroclor 1260 Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

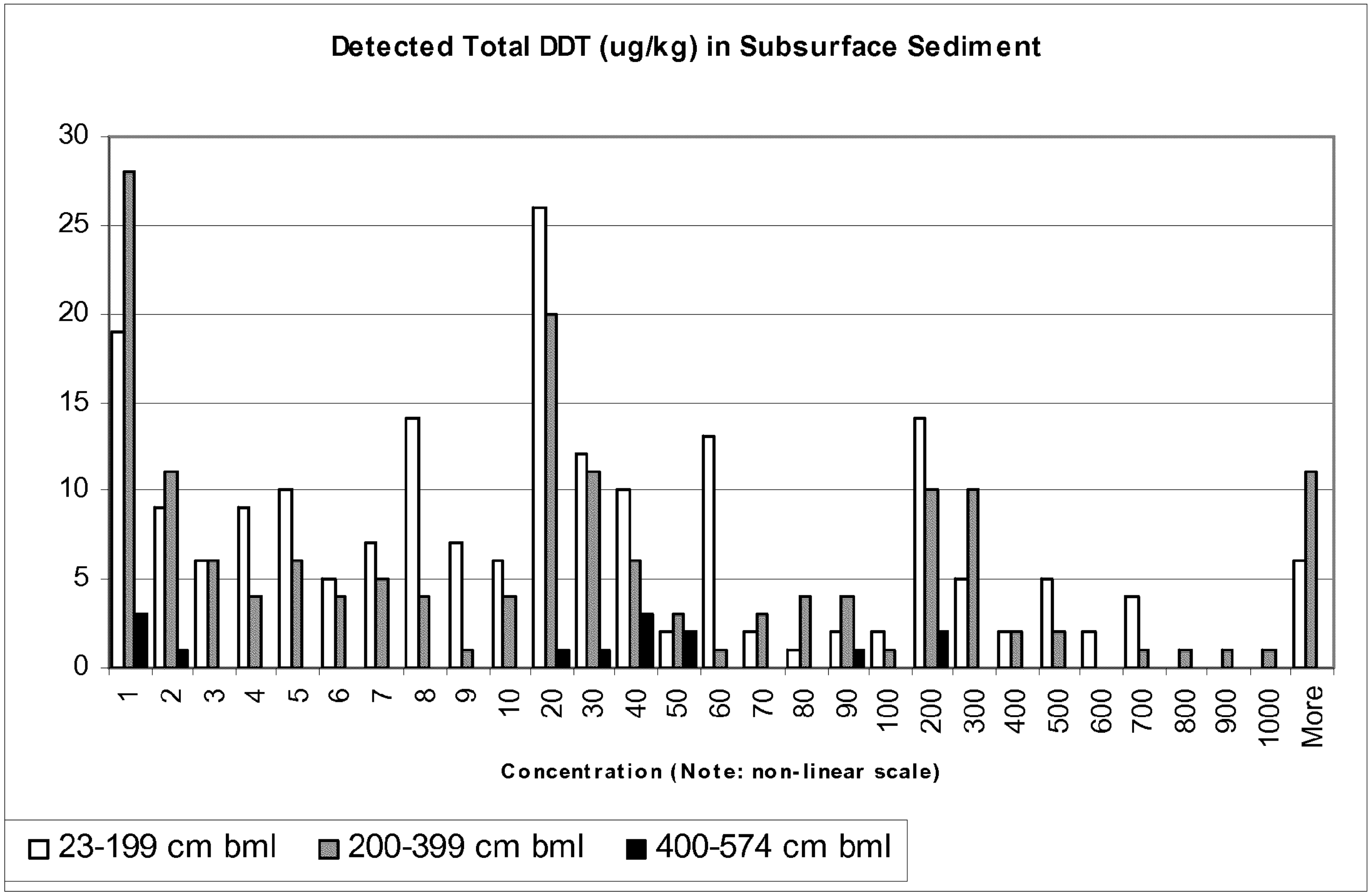

Figure 4-42. Histogram of Detected Total DDT Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

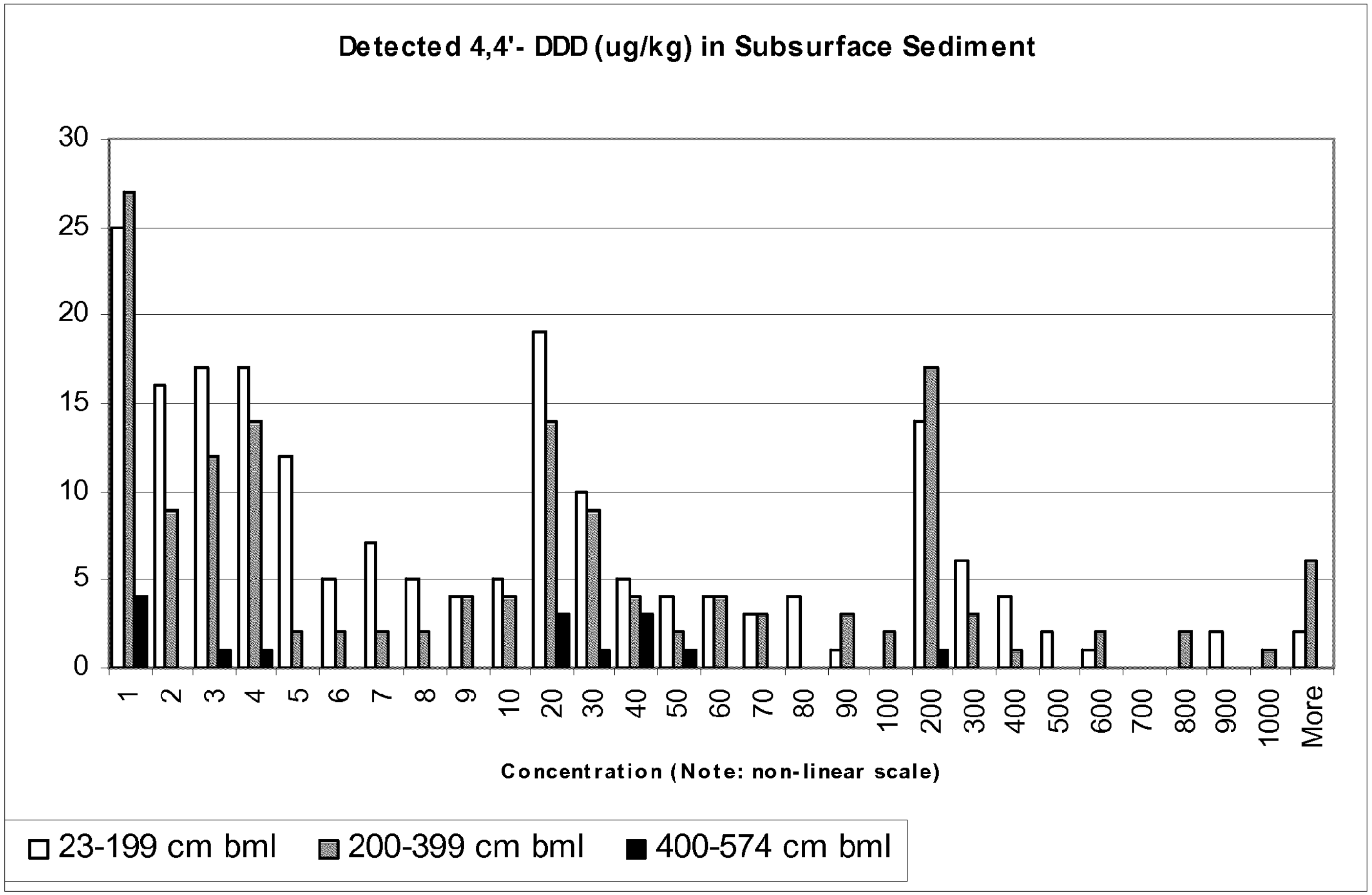

Figure 4-43. Histogram of Detected 4,4'-DDD Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

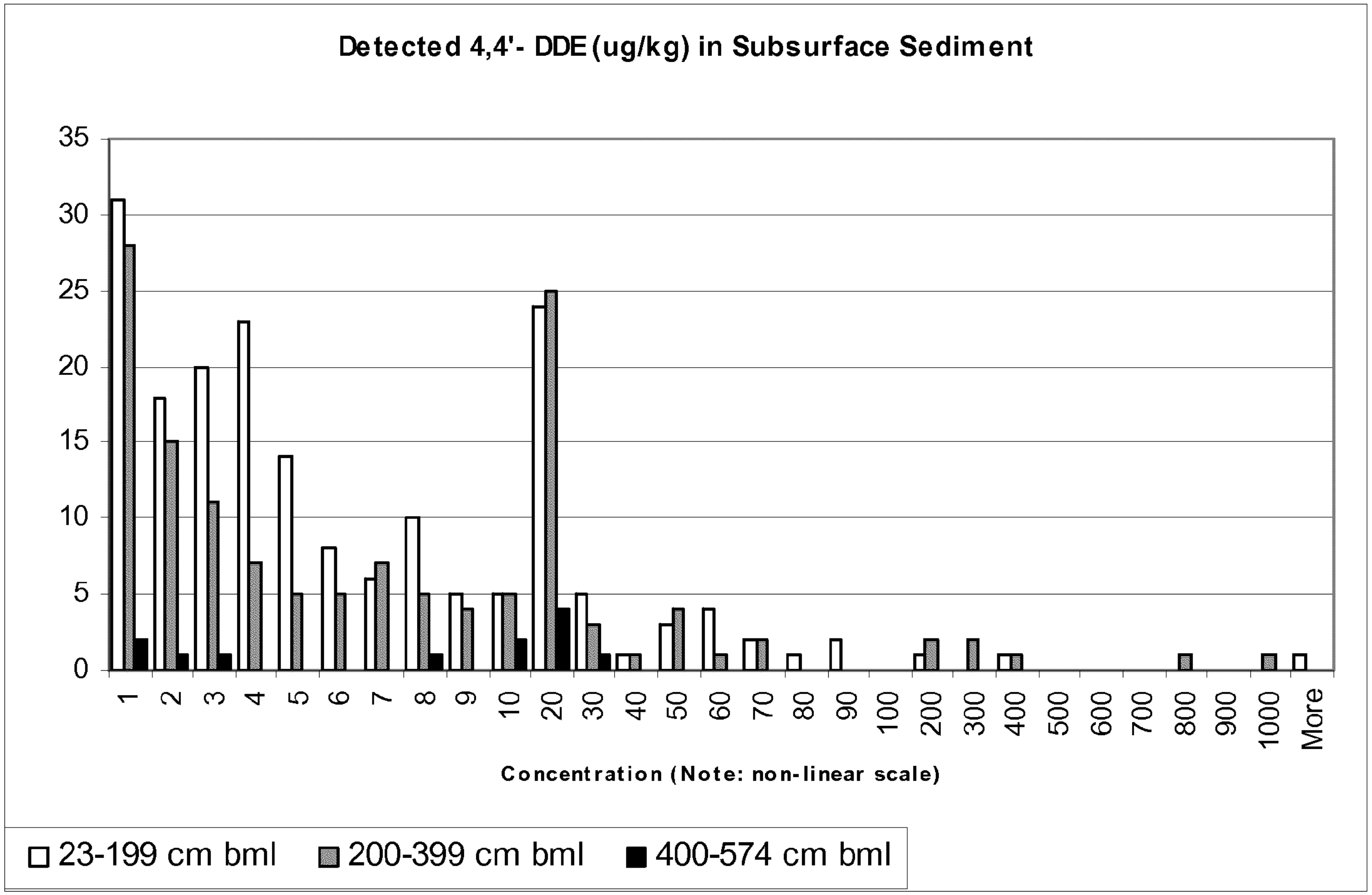

Figure 4-44. Histogram of Detected 4,4'-DDE Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

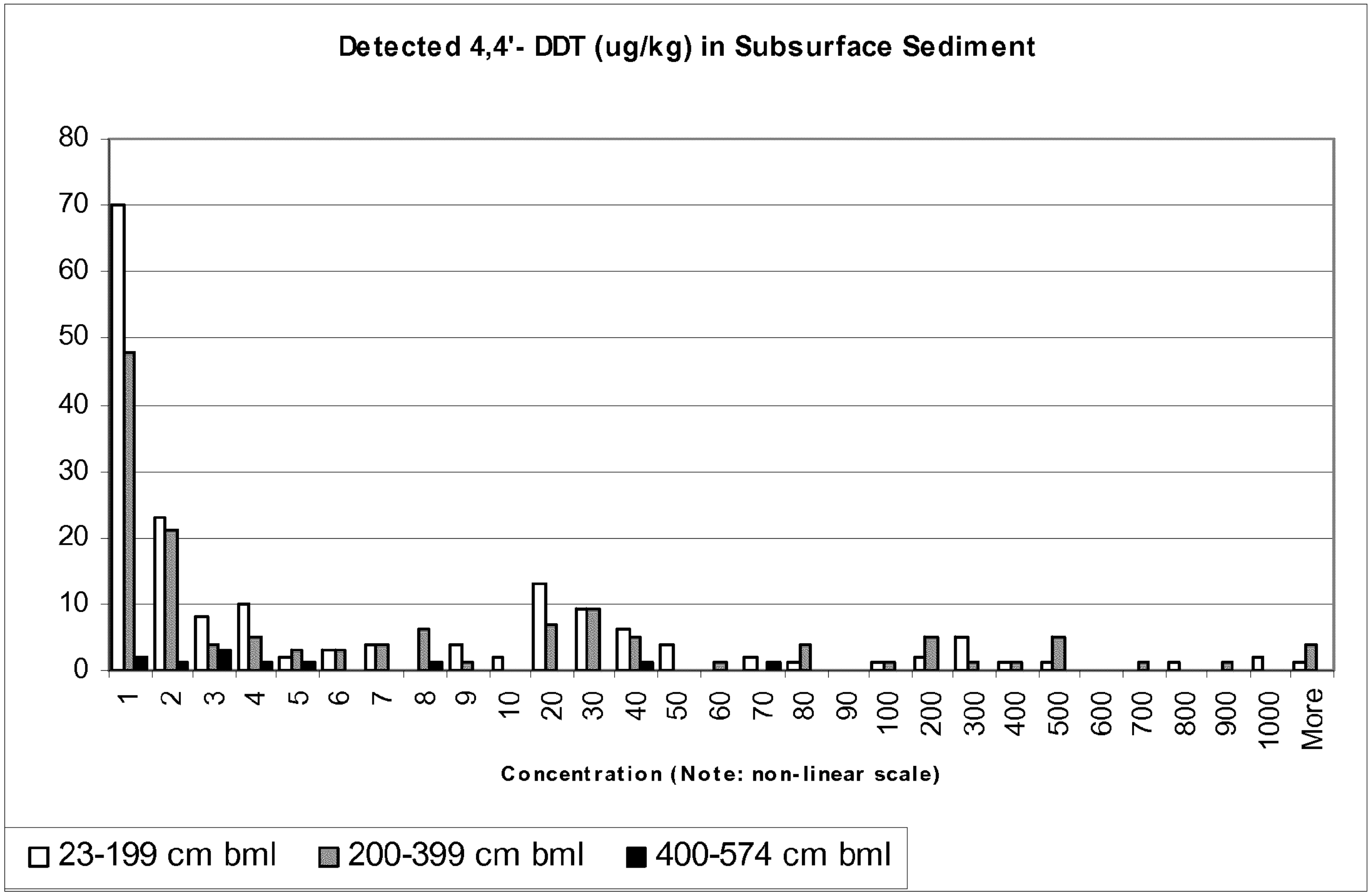

Figure 4-45. Histogram of Detected 4,4'-DDT Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

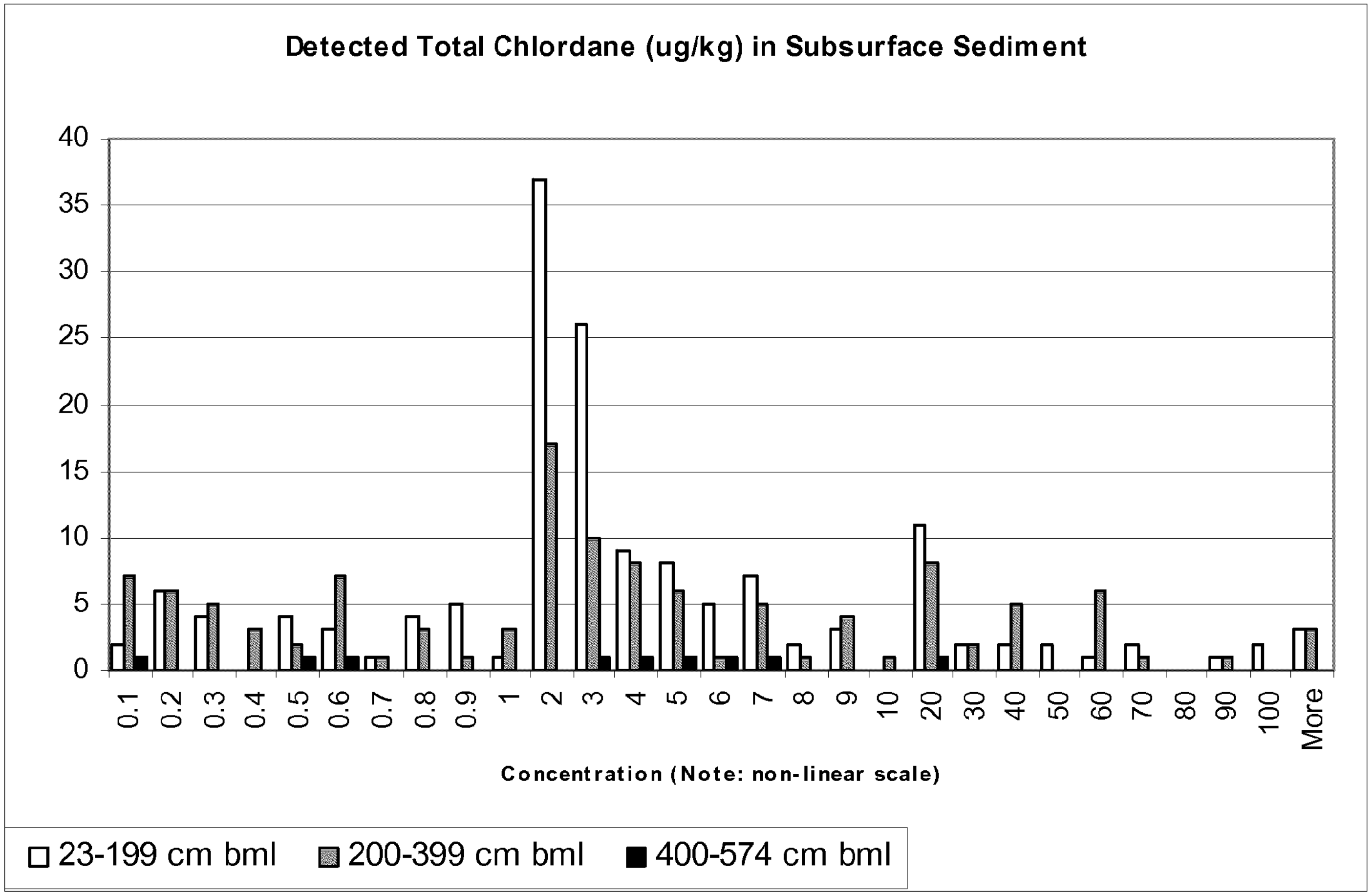

Figure 4-46. Histogram of Detected Total Chlordane Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

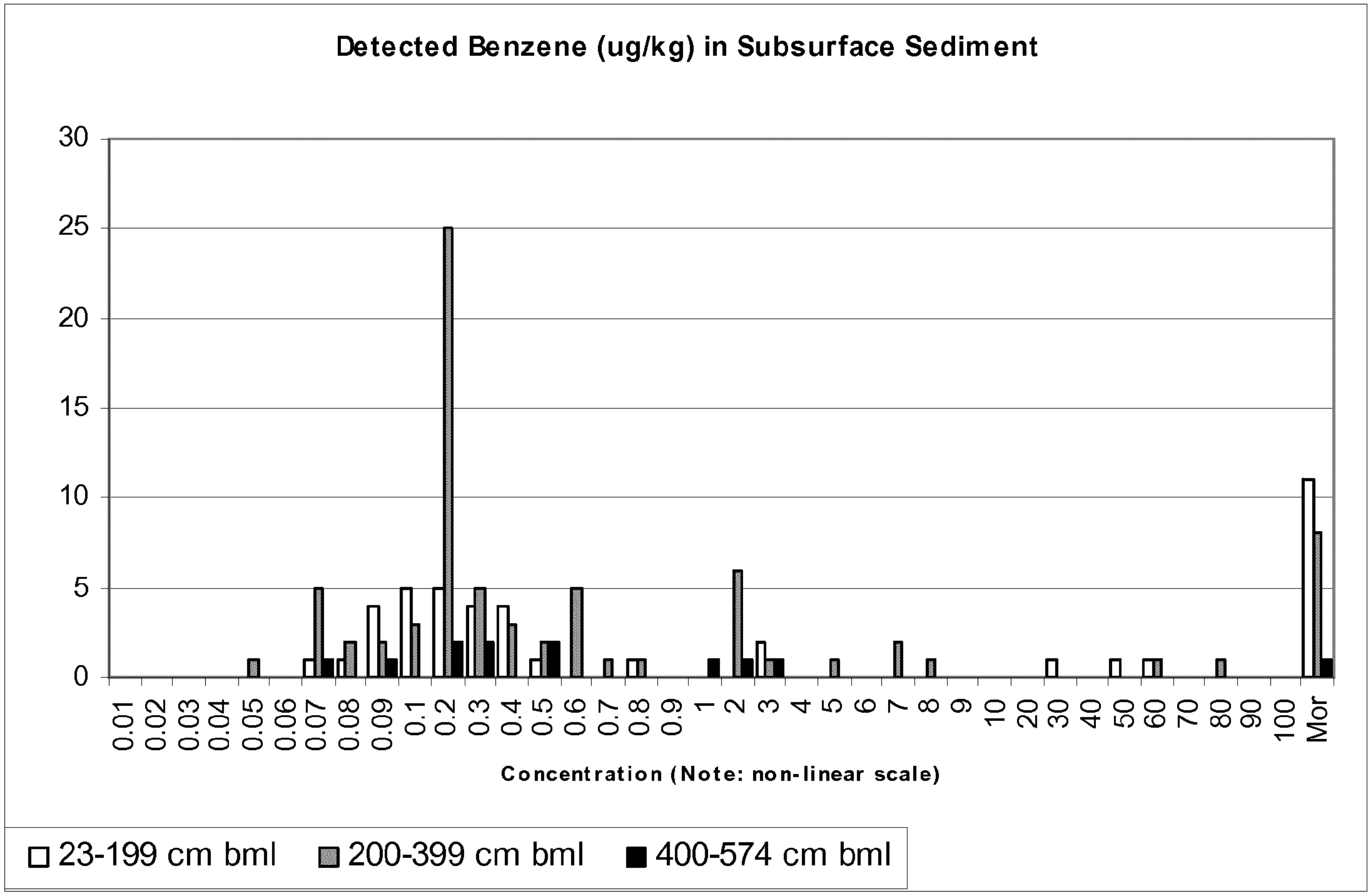

Figure 4-47. Histogram of Detected Benzene Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

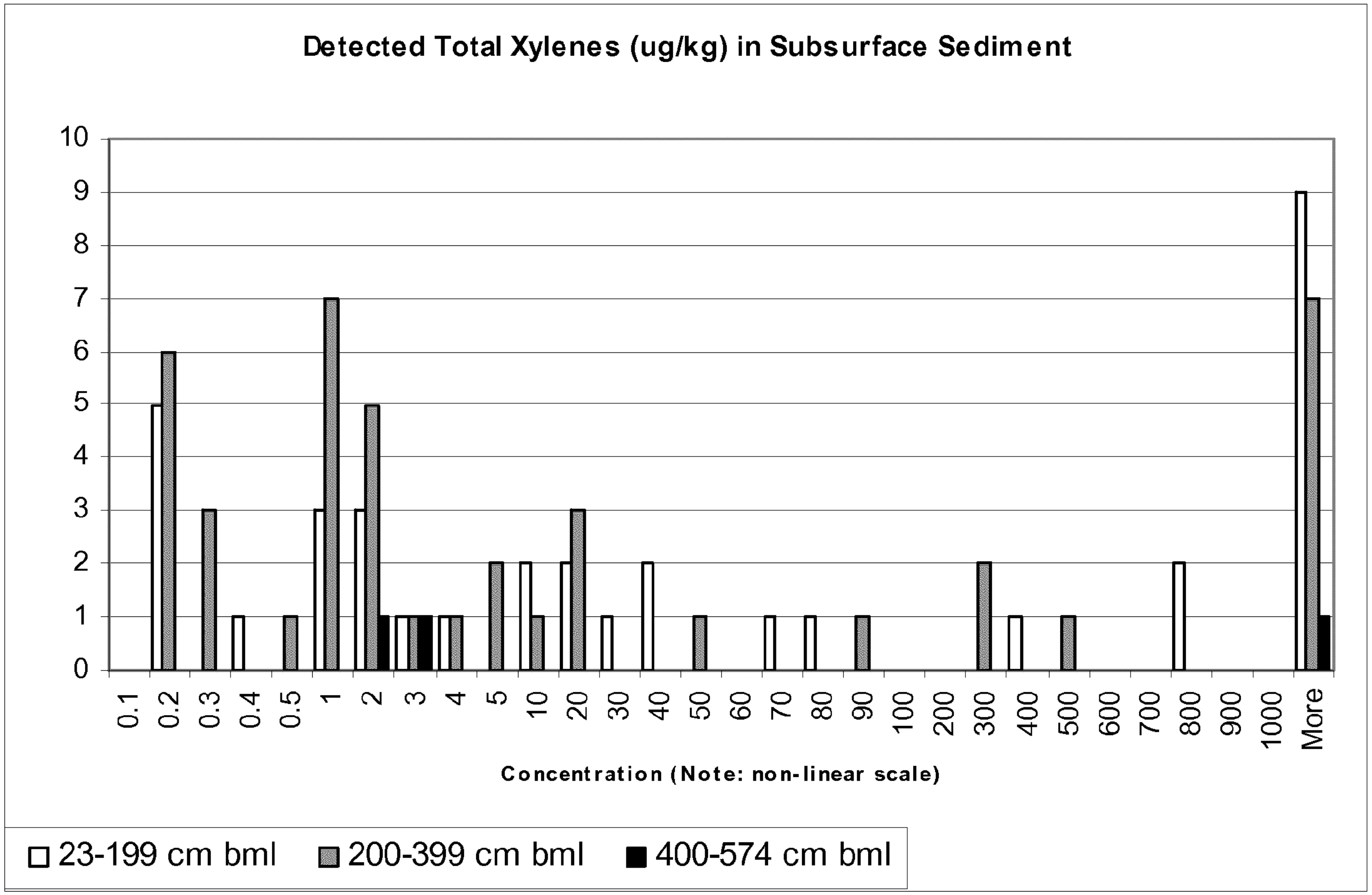

Figure 4-48. Histogram of Detected Total Xylenes Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

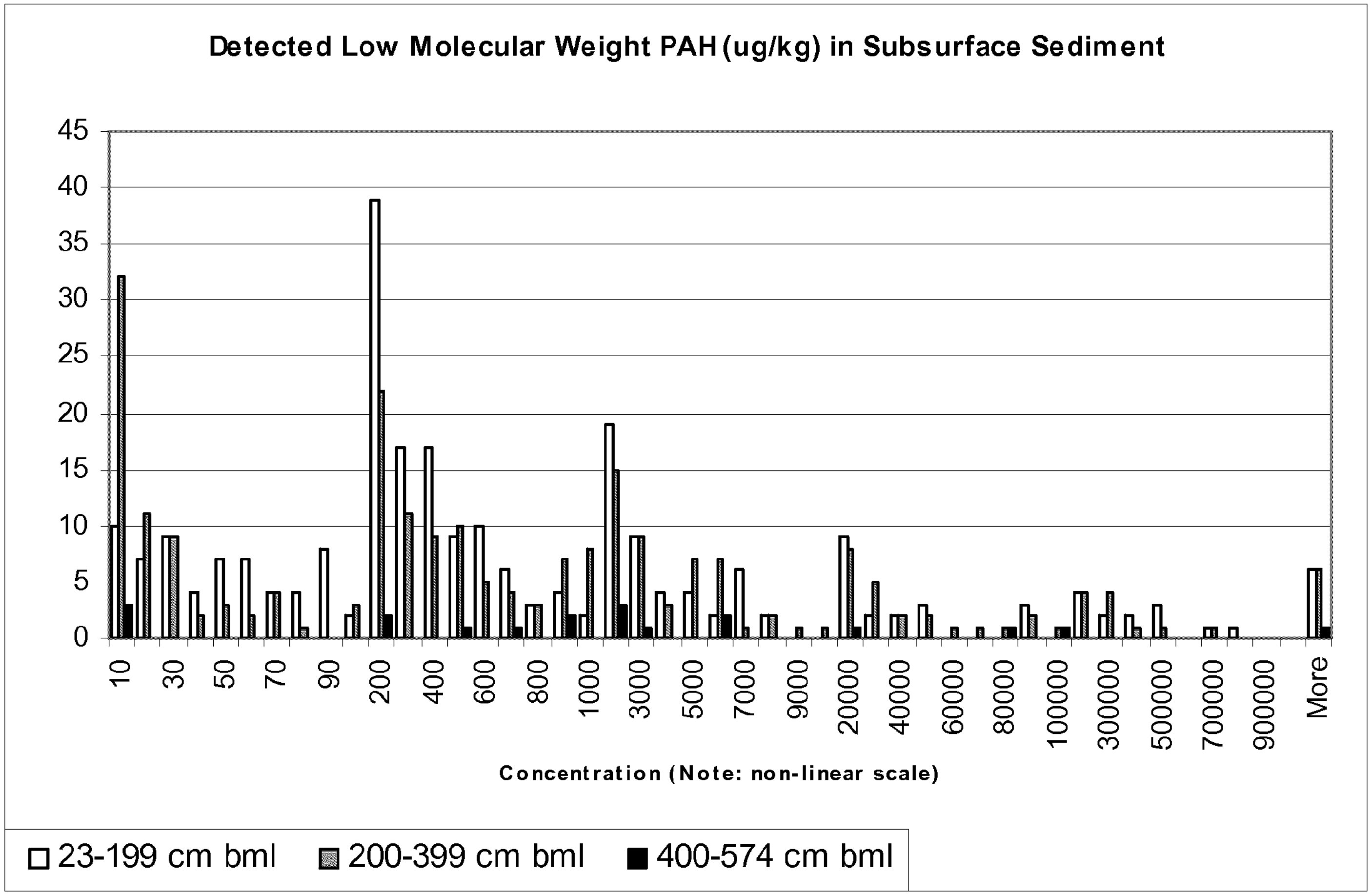

Figure 4-49. Histogram of Detected Low Molecular Weight PAH Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

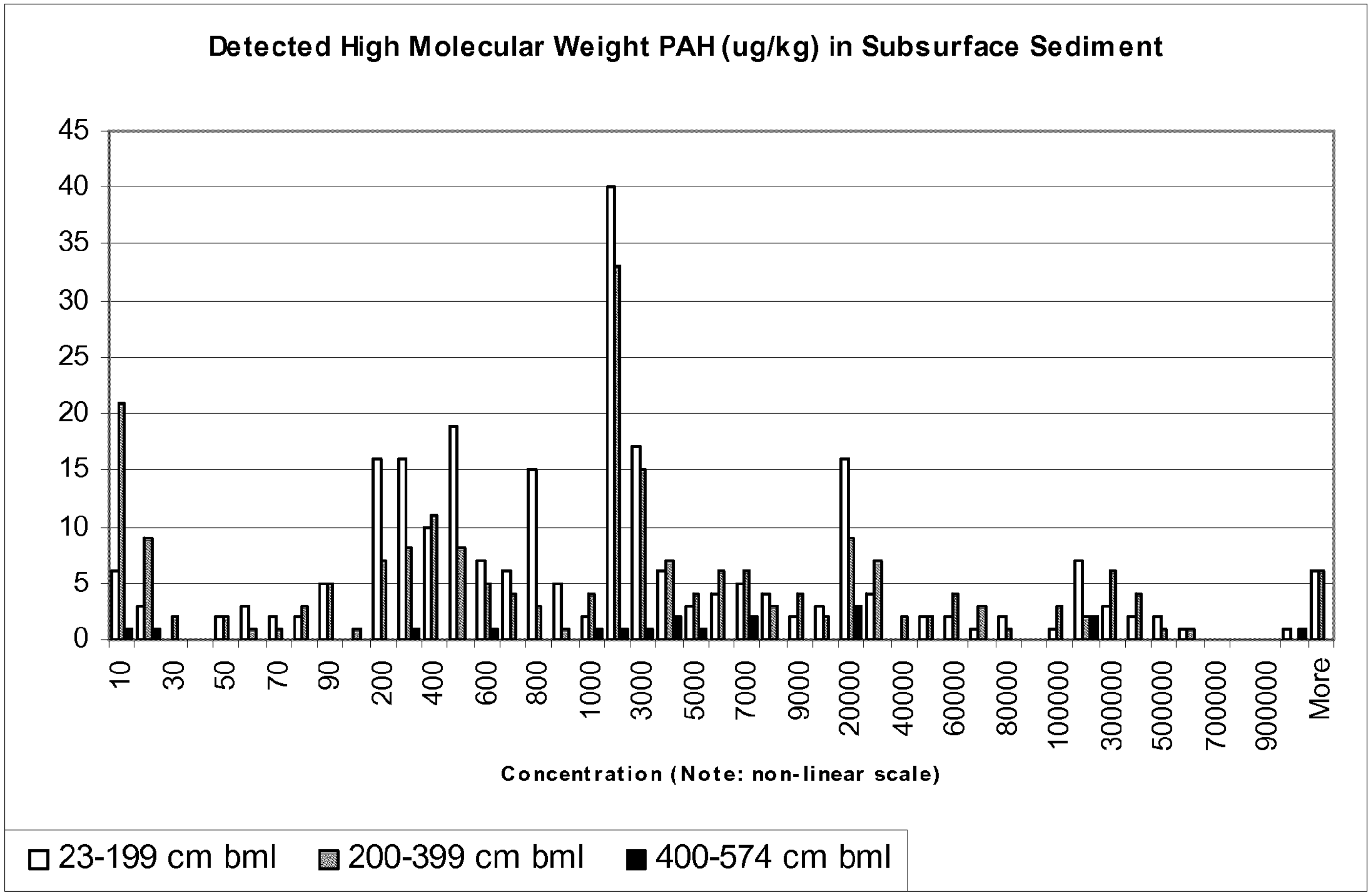

Figure 4-50. Histogram of Detected High Molecular Weight PAH Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

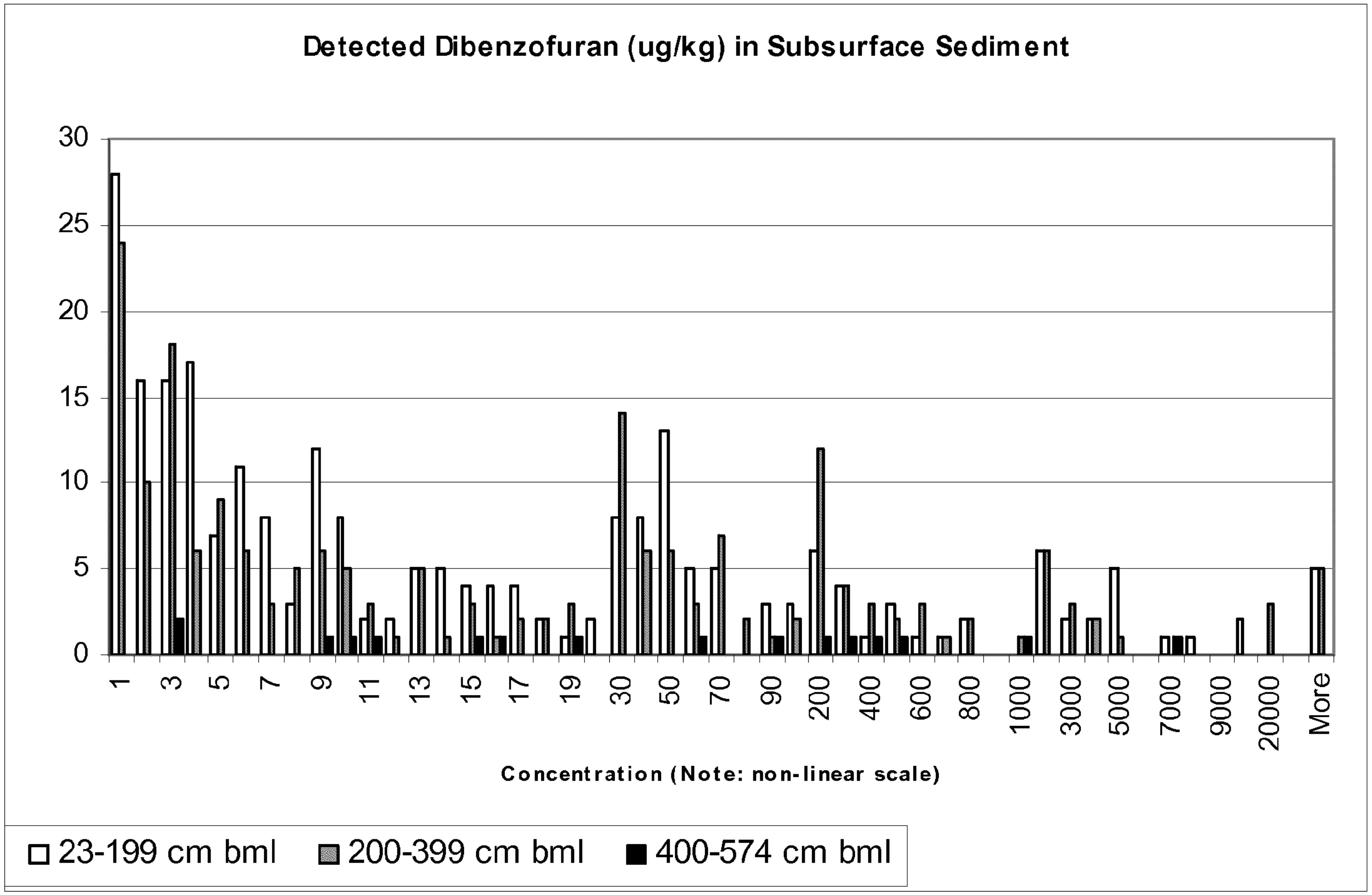

Figure 4-51. Histogram of Detected Dibenzofuran Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

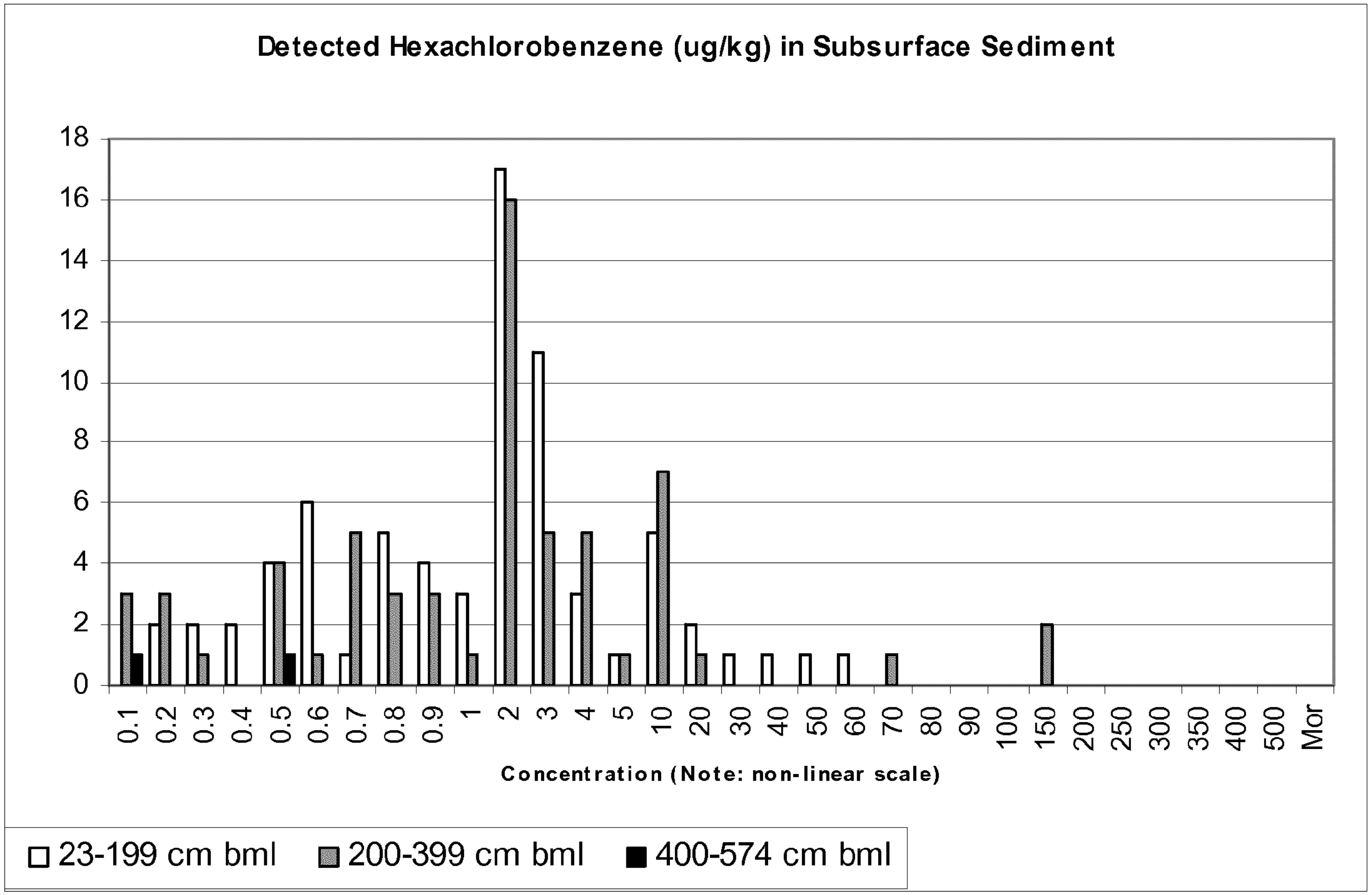

Figure 4-52. Histogram of Detected Hexachlorobenzene Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

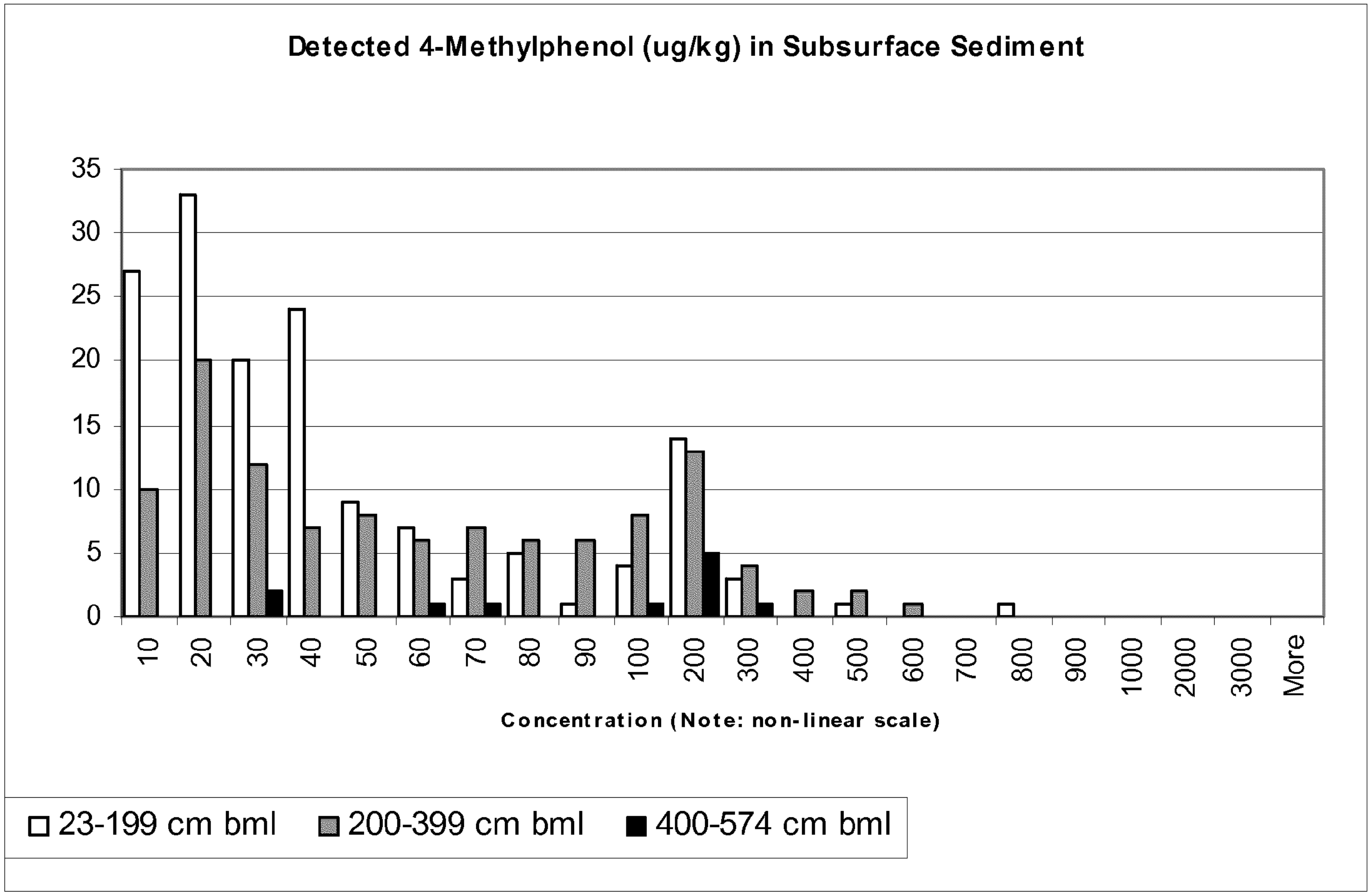

Figure 4-53. Histogram of Detected 4-Methylphenol Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

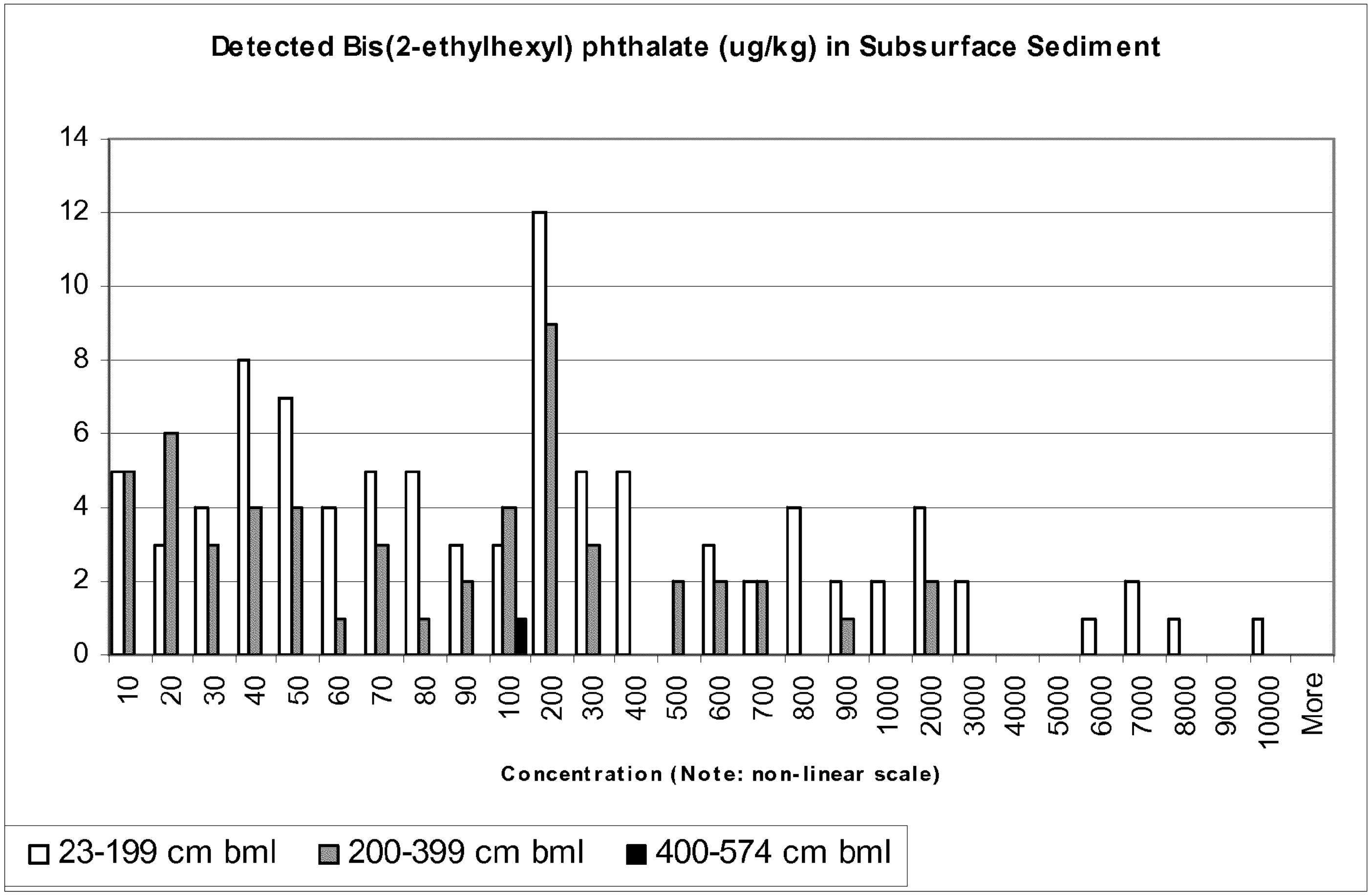

Figure 4-54. Histogram of Detected Bis(2-ethylhexyl) phthalate Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

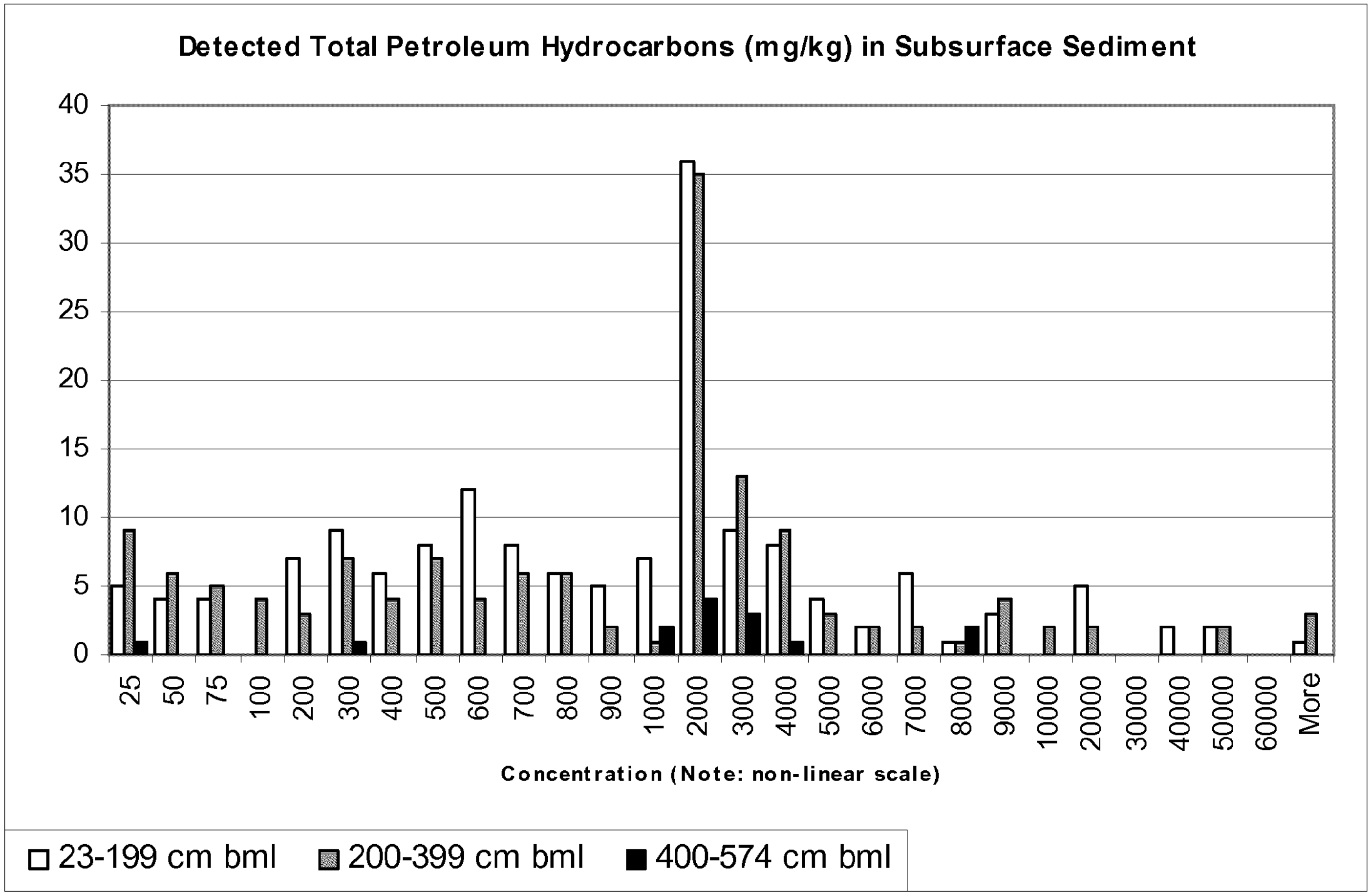

Figure 4-55. Histogram of Detected Total TPH Concentrations in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

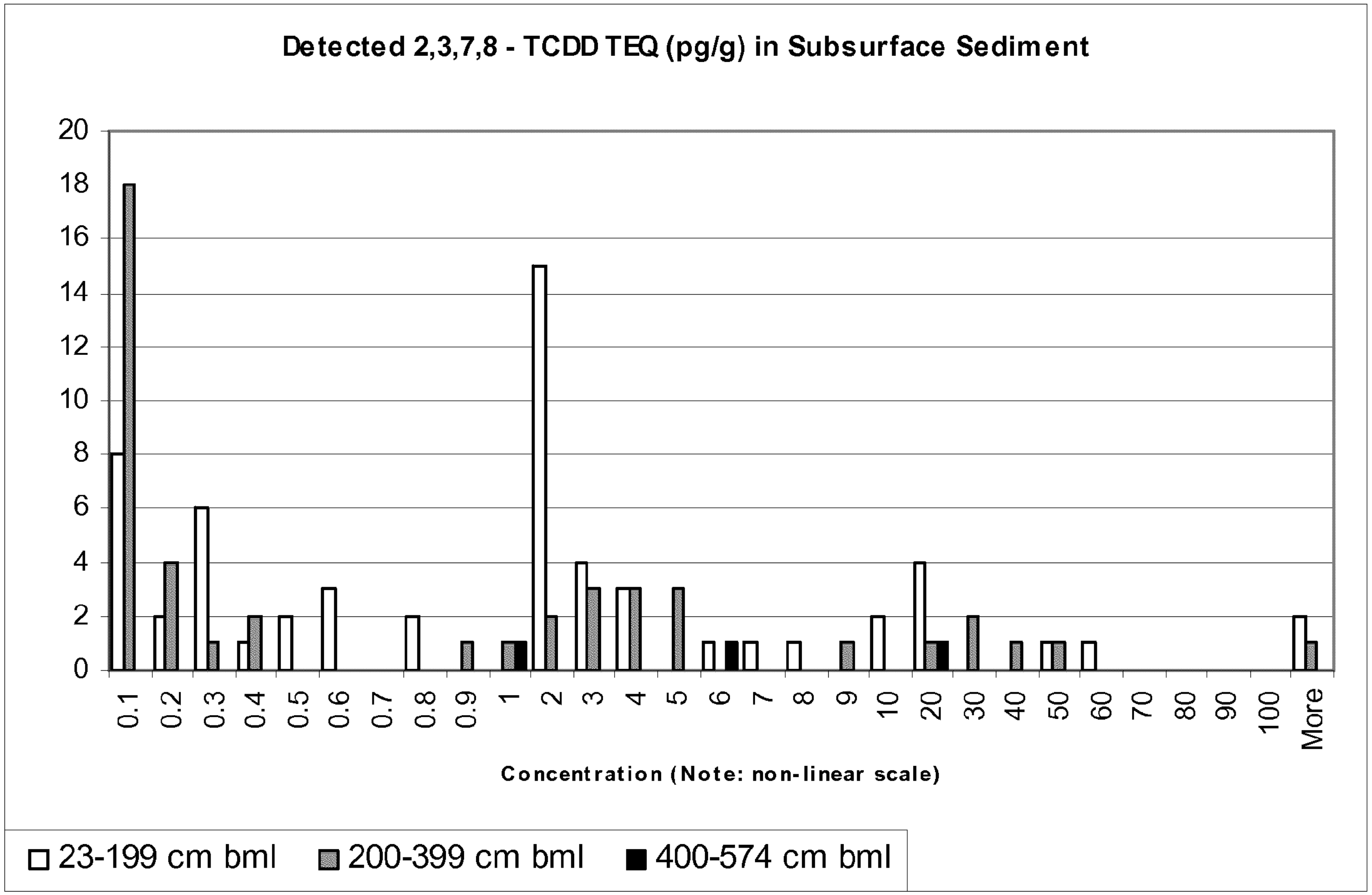

Figure 4-56. Histogram of Detected 2, 3, 7, 8 – TCDD TEQ Values in Round 2A Subsurface Sediment Samples, Sorted by Depth Group.

Table 2-1. Round 2A Surface Sediment Stations Moved from Target Locations and Rationale.

Relocated Station	Distance in Feet /Direction Moved	Rationale
LW2-G043	65/offshore	Station reposition outboard of ship moored at dock
LW2-G046	73/offshore	Station reposition outboard of ship moored at dock
LW2-G062	56/offshore and downstream	Station repositioned offshore of outfall
LW2-G079	46/offshore	Bottom not conducive to sampling at target (hard clay), moved offshore
LW2-G093[1]	56/west along pier face	Moored barge and dredging operations at target - see note 1
LW2-G094[1]	85/east along pier face	Moored barge and dredging operations at target - see note 1
LW2-G112	96/downstream	Station repositioned downstream of outfall
LW2-G116	72/offshore	Navigation error
LW2-G127	48/offshore	Target on riprap, moved offshore to area with sediment
LW2-G130	75/offshore	Target too shallow for boat access, moved to deeper water
LW2-G133	68/offshore	Target in shallow water and blocked by pilings, moved offshore
LW2-G135	117/offshore and downstream	Target on land, relocated downstream of elevated outfall at end of overwater pier
LW2-G151	Station dropped	On land, see G155
LW2-G153	52/offshore and upstream	Moved offshore of target to provide separation from relocated G155 (see G155)
LW2-G155	88/offshore and downstream	On land, moved offshore and mid-way between G151 and G155 target
LW2-G161	34/offshore	Target on upper beach in rocky area; each sample collected on sandy beach below
LW2-G167	Station dropped	On land, station G166 just offshore
LW2-G179	39/offshore	Target too shallow for boat access, moved to deeper water
LW2-G192	113/downstream	Extensive wood debris at target location
LW2-G200	80/offshore	Target area scoured from tug traffic, moved offshore to area with sediment
LW2-G201	Station dropped	Target very close to station G203
LW2-G205	171/offshore	Target area scoured from tug traffic, moved offshore to area with sediment
LW2-G206	69/inshore and downstream	Extenisve wood debris at target location
LW2-G211	Station dropped	Area scoured by tug traffic
LW2-G217	105/offshore and downstream	Tug berthed and rocky substrate near target location
LW2-G225	Station added	Navigation error, inadvertently sampled 371 ft from target and sample analyzed, station G520 added at original G225 target
LW2-G233	46/downstream	Extensive wood debris at target location
LW2-G249	68/downstream	Extensive wood debris at target location
LW2-G250	157/inshore and upstream	Extensive wood debris at target location
LW2-G254	50/downstream	Extensive wood debris at target location
LW2-G297	Station added	Navigation error, inadvertently sampled 124 ft from target and sample analyzed, station G521 added at original G297 target
LW2-G304	Station dropped	On land, station G302 just offshore
LW2-G312	Station dropped	On land, station G311 just offshore
LW2-G363	46/offshore	Target on rocky substrate, moved offshore
LW2-G409	116/offshore	Station reposition outboard of ship moored at dock
LW2-G411	79/onshore	No boat access behind dock structure, sampled closest area on shore at low water
LW2-G420	57/offshore	Target under dock structure, sample collected immediately adjacent to dock
LW2-G430	57/offshore	Target too shallow for boat access, moved to deeper water
LW2-G455	60/offshore	Target too shallow for boat access, moved to deeper water
LW2-G473	51/offshore	Target too shallow for boat access, moved to deeper water
LW2-G500	47/offshore	Target too shallow for boat access, moved to deeper water
LW2-G506	134/offshore and downstream	Target under dock structure, wood debris just offshore, moved to area with sediment
LW2-G520	see G225	In FSP, this station location is identified as G225 (see G225)
LW2-G521	see G297	In FSP, this station location is identified as G297 (see G297)

Note:
1 - Collection of this sample as close to the target location as possible while avoiding the dredged area was verbally approved by EPA following observations by the field crew that this portion of the Schnitzer International Slip had been dredged during the week of October 18, 2004.

Table 2-2. Round 2A Subsurface Sediment Stations Moved from Target Locations and Rationale.

Relocated Station	Distance in Feet/Direction Moved	Rationale
C060	64/offshore	Deeper water needed to deploy vibracore
C064	118/offshore	Deeper water needed to deploy vibracore
C111-1	105/inshore and downstream	Schnitzer barge and log boom blocked access to target
C111-2	108/inshore and downstream	Schnitzer barge and log boom blocked access to target
C130	55/offshore and downstream	Deeper water needed to deploy vibracore
C136	50/offshore	Deeper water needed to deploy vibracore
C142	127/offshore and downstream	Deeper water needed to deploy vibracore
C147	97/offshore	Deeper water needed to deploy vibracore
C151	Station dropped	On land, see G155 (see Table 2-2 of Integral et al. 2004a)
C164	173/downstream	Dock structure blocked access to target
C166	Proposed Round 2B core, replaced proposed Round	
C167	Station dropped, replaced by 166	On land, station 166 just offshore
C201	Station dropped; station on shore, replaced by 203	Target very close to station 203
C203	Replaced 201	
C245	59/offshore and upstream	Barge moored over target
C255	291/offshore and downstream	Moved off basalt ledge/rocky substrate toward center of channel
C257	62/offshore	Moved to avoid wood (?) debris at target location
C263	58/offshore	Deeper water needed to deploy vibracore
C269	51/offshore	Deeper water needed to deploy vibracore
C282	91/offshore	Deeper water needed to deploy vibracore
C297	Station added	Navigation error, See G297 (see Table 2-2 of Integral et al. 2004a)
C300-1	75/upstream	Moved off basalt ledge/rocky substrate; archived due to poor recovery
C300-2	235/upstream	Moved station 300 for better recovery
C301	96/offshore and upstream	Deeper water needed to deploy vibracore
C311	Proposed Round 2B core, replaced proposed Round 2A core 312	See C312, below
C312	Station dropped, replaced by 311	Station on shore
C331	51/offshore	Deeper water needed to deploy vibracore
C341	56/inshore	Basalt gravel at target
C348	64/offshore	Deeper water needed to deploy vibracore
C371	109/offshore and upstream	Deeper water needed to deploy vibracore
C377	72/offshore	Deeper water needed to deploy vibracore
C430	97/offshore	Deeper water needed to deploy vibracore
C431	110/offshore	Deeper water needed to deploy vibracore
C434	53/offshore	Deeper water needed to deploy vibracore
C437	191/offshore	Deeper water needed to deploy vibracore
C439	111/offshore	Deeper water needed to deploy vibracore
C445	379/offshore and downstream	Deeper water needed to deploy vibracore
C455	65/offshore	Dock structure blocked access to target
C494	157/offshore	Deeper water needed to deploy vibracore
C521	Replaces 297	In FSP, this station location is identified as C297 (see G297, see Table 2-2 of Integral et al. 2004a)

Table 3-1. Laboratory Methods of Analysis for Sediment Samples[a].

Analytes	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	Procedure	Protocol	Procedure
Conventional Analyses	CAS Kelso				
Total solids		NA	--	PSEP 1986	Balance
Grain size		NA	--	PSEP 1986	Sieves and pipette methoc
Total sulfides		EPA 9030	Distillation	EPA 9030	Colorimetry
Ammonia		Plumb 1981	KCl extraction	EPA 350.1	Colorimetry
Total organic carbon		Plumb 1981	Acid pretreatment	Plumb 1981	Combustion; coulometric titration
Geotechnical Characteristics	CAS Redding				
Specific gravity		--	--	ASTM D-854	Gravimeter
Atterberg limits		--	--	ASTM D-4318	Moisture determination
Metals	CAS Kelso				
Antimony, arsenic, cadmium, lead, silver		EPA 3050	Strong acid digestion	EPA 6020	ICP/MS
Aluminum, chromium, copper, nickel, zinc		EPA 3050	Strong acid digestion	EPA 6010B	ICP/OES
Selenium		EPA 3050	Strong acid digestion	EPA 7742	AAS
		EPA 7742	Hydride generation		
Mercury		EPA 7471A	Acid digestion/oxidation	EPA 7471A	CVAA
Hexavalent chromium		EPA 3060A	Alkaline digestion	EPA 7196A	Colorimetry
Butyltins	CAS Kelso	Krone et al. 1989	Solvent extraction	Krone et al. 1989	GC/FPD
			Derivatization		
Petroleum Hydrocarbons	CAS Kelso				
Gasoline-range hydrocarbons		NWTPH-Gx	Methanol extraction	NWTPH-Gx	GC/FID
			Purge and trap		
Diesel- and oil-range hydrocarbons		NWTPH-Dx	Sovent extraction	NWTPH-Dx	GC/FID
			Silica gel cleanup (as needed)		
Chlorinated Herbicides and Pentachlorophenol	STL Tacoma	EPA 8151A	Solvent extraction	EPA 8151A	GC/MS
			Esterification		
Organochlorine Pesticides and Selected SVOCs	NEA	EPA 3540	Soxhlet extraction	EPA 8081A	GC/ECD
		EPA 3620B	Florisil® cleanup		
		EPA 3660B	Sulfur cleanup		
PCB Aroclors	NEA	EPA 3545	Pressurized fluid extraction	EPA 8082	GC/ECD
		EPA 3665A	Sulfuric acid cleanup		
		EPA 3620B	Florisil® cleanup		
		EPA 3660B	Sulfur cleanup		
Volatile Organic Compounds	CAS Kelso	EPA 5035	Purge and trap	EPA 8260B	GC/MS

Table 3-1. Laboratory Methods of Analysis for Sediment Samples[a].

Analytes	Laboratory	Sample Preparation		Quantitative Analysis	
		Protocol	**Procedure**	**Protocol**	**Procedure**
Semivolatile Organic Compounds	CAS Kelso				
Tri-, tetra-, and pentachlorophenols[a]		EPA 8151A	Solvent extraction	EPA 8151A	GC/MS
			Esterification		
Polycyclic Aromatic Hydrocarbons		EPA 3541	Automated Soxhlet extraction	EPA 8270C	GC/MS - SIM
		EPA 3640A	Gel permeation chromatography		
		EPA 3630C	Silica gel cleanup		
SVOCs (other than PAHs and tri-, tetra-,		EPA 3541	Automated Soxhlet extraction	EPA 8270C	GC/MS - LVI
and pentachlorophenols)		EPA 3640A	Gel permeation chromatography		
PCB Congeners[b]	Alta	EPA 1668A	Soxhlet/Dean Stark extraction	EPA 1668A	HRGC/HRMS
			Sulfuric acid cleanup		
			Silica column cleanup		
Chlorinated Dioxins and Furans	CAS Houston	EPA 1613B	Soxhlet/Dean Stark extraction	EPA 1613B	HRGC/HRMS
			Sulfuric acid cleanup		
			Silica/carbon column cleanup		

Notes:

[a]Methods for radionuclide analyses performed on sedimentation cores will be reported by Anchor (2005).
[b]Only beach sediment samples have been analyzed for coplanar PCB congeners.

AAS - Atomic absorption spectrometry
ASTM - American Society for Testing and Materials
CAS - Columbia Analytical Services
CVAA - cold vapor atomic absorption
EPA - U.S. Environmental Protection Agency
GC/ECD - gas chromatography/electron capture detection
GC/FID - gas chromatography/flame ionization detection
GC/FPD - gas chromatography/flame photometric detection
GC/MS - gas chromatography/mass spectrometry
HRGC/HRMS - high-resolution gas chromatography/high-resolution mass spectrometry
ICP/OES - inductively coupled plasma/optical emission spectrometry
ICP/MS - inductively coupled plasma - mass spectrometry
KCl - potassium chloride
LVI - large-volume injector
MRL - method reporting limit
NA - not applicable
NEA - Northeast Analytical
TPH - total petroleum hydrocarbon
PAH - polycyclic aromatic hydrocarbon
PCB - polychlorinated biphenyl
PSEP - Puget Sound Estuary Program
SIM - selected ion monitoring
STL - Severn Trent Laboratories
SVOC - semivolatile organic compound

Table 3-2. Round 2A Beach Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	SVOCs	Pesticides	PCB Aroclors	PCB Congeners[1]	Metals, Hg, TS, TOC	Dioxins/ Furans
7/27/2004	**LW2-B001**	X	X	X	X		X	X
7/28/2004	**LW2-B002**	X	X	X	X	X	X	X
7/27/2004	**LW2-B003**	X	X	X	X		X	X
7/28/2004	**LW2-B004**	X	X	X	X	X	X	X
7/27/2004	**LW2-B005**	X	X	X	X		X	X
7/28/2004	**LW2-B006**	X	X	X	X		X	X
7/29/2004	**LW2-B007**	X	X	X	X	X	X	X
7/30/2004	**LW2-B008**	X	X	X	X	X	X	X
7/26/2004	**LW2-B009**	X	X	X	X		X	X
7/28/2004	**LW2-B010**	X	X	X	X		X	X
7/28/2004	**LW2-B011**	X	X	X	X		X	X
7/29/2004	**LW2-B012**	X	X	X	X		X	X
7/26/2004	**LW2-B015**	X	X	X	X	X	X	X
7/27/2004	**LW2-B016**	X	X	X	X		X	X
7/29/2004	**LW2-B017**	X	X	X	X	X	X	X
7/30/2004	**LW2-B018**	X	X	X	X	X	X	X
7/26/2004	**LW2-B019**	X	X	X	X		X	X
7/30/2004	**LW2-B020**	X	X	X	X	X	X	X
7/29/2004	**LW2-B021**	X	X	X	X		X	X
7/27/2004	**LW2-B022-1**	X	X	X	X	X	X	X
7/27/2004	**LW2-B022-2**	R	R	R	R	X	R	R
7/26/2004	**LW2-B023**	X	X	X	X	X	X	X
7/30/2004	**LW2-B024**	X	X	X	X	X	X	X
7/29/2004	**LW2-B025-1**	X	X	X	X		X	X
7/29/2004	**LW2-B025-2**	R	R	R	R		R	R
7/29/2004	**LW2-B025-3**	S	S	S	S		S	S
7/26/2004	**LW2-B026**	X	X	X	X	X	X	X
11/5/2004	**LW2-B050**	X	X	X	X		X	

Notes:

[1]Samples for potential analysis of coplanar PCB congeners were collected for all beach samples and archived (frozen). Selected samples were later analyzed.

R = Field Replicate

S = Homogenate Split

Blank shaded cells indicate a missing analysis.

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB-Aroclors	Metals + Hg + TS + TOC	Ammonia	Cr-VI (Hexavalent Chromium)	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs	PCB Congeners	Dioxins/ Furans	Herbicides & Pentachlorophenol	Total Sulfides	Bioassay	Bioassay & Chemistry - EPA split
7/19/2004	LW2-G001	X	X	X	X	X	X												
7/19/2004	LW2-G002	X	X	X	X	X	X												
7/21/2004	LW2-G003	X	X	X	X	X	X												
7/19/2004	LW2-G004	X	XX	X	X	X	X												
7/21/2004	LW2-G005	X	XX	X	X	X	X												
7/21/2004	LW2-G006	X	X	X	X	X	X												
7/20/2004	LW2-G007-1	X	X	X	X	X	X	X			X	X					X	X	X
7/20/2004	LW2-G007-2	R	R	R	R	R	R	R			R	R					R		
7/20/2004	LW2-G007-3	S	S	S	S	S	S	S			S	S					S		
7/21/2004	LW2-G008	X	X	X	X	X	X												
7/19/2004	LW2-G009	X	X	X	X	X	X	X			X	X					X	X	
7/19/2004	LW2-G010	X	XX	X	X	X	X	X			X	X					X	X	
7/19/2004	LW2-G011	X	X	X	X	X	X	X			X	X					X	X	
7/21/2004	LW2-G012	X	X	X	X	X	X												
7/21/2004	LW2-G013	X	X	X	X	X	X				X	X							
7/21/2004	LW2-G014	X	X	X	X	X	X												
7/20/2004	LW2-G015	X	X	X	X	X	X	X			X	X					X	X	
7/23/2004	LW2-G016	X	X	X	X	X	X				X	X							
7/20/2004	LW2-G017	X	X	X	X	X	X	X			X	X					X	X	
7/23/2004	LW2-G018	X	X	X	X	X	X												
7/20/2004	LW2-G019	X	X	X	X	X	X	X			X	X					X	X	
7/26/2004	LW2-G020	X	X	X	X	X	X	X			X	X			X	X	X	X	
7/23/2004	LW2-G021	X	X	X	X	X	X				X	X							
7/23/2004	LW2-G022	X	X	X	X	X	X				X	X							
8/4/2004	LW2-G023-1	X	X	X	X	X	X												
8/4/2004	LW2-G023-2	R	R	R	R	R	R												
8/4/2004	LW2-G023-3	S	S	S	S	S	S												
7/26/2004	LW2-G024	X	X	X	X	X	X	X			X	X					X	X	
7/26/2004	LW2-G025	X	X	X	X	X	X	X			X	X					X	X	
7/20/2004	LW2-G026	X	XX	X	X	X	X	X			X	X					X	X	X
7/26/2004	LW2-G027	X	X	X	X	X	X	X			X	X					X	X	
8/4/2004	LW2-G028	X	X	X	X	X	X												
7/27/2004	LW2-G029	X	X	X	X	X	X												
7/27/2004	LW2-G030	X	X	X	X	X	X												
8/4/2004	LW2-G031	X	X	X	X	X	X												
7/23/2004	LW2-G032	X	X	X	X	X	X												
7/26/2004	LW2-G033	X	X	X	X	X	X	X			X	X					X	X	
7/26/2004	LW2-G034	X	X	X	X	X	X	X			X	X					X	X	
7/26/2004	LW2-G035	X	X	X	X	X	X	X			X	X					X	X	
7/23/2004	LW2-G036	X	X	X	X	X	X												
7/23/2004	LW2-G037	X	X	X	X	X	X												
9/8/2004	LW2-G038	X	X	X	X	X	X	X			X	X			X	X	X	X	

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB-Aroclors	Metals + Hg + TS + TOC	Ammonia	Cr-VI (Hexavalent Chromium)	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs	PCB Congeners	Dioxins/ Furans	Herbicides & Pentachlorophenol	Total Sulfides	Bioassay	Bioassay & Chemistry - EPA split
7/23/2004	LW2-G039	X	X	X	X	X	X												
7/23/2004	LW2-G040	X	X	X	X	X	X												
7/23/2004	LW2-G041	X	X	X	X	X	X												
7/23/2004	LW2-G042	X	X	X	X	X	X												
8/4/2004	LW2-G043	X	X	X	X	X	X												
8/5/2004	LW2-G044-1	X	X	X	X	X	X												
8/5/2004	LW2-G044-2	R	R	R	R	R	R												
8/5/2004	LW2-G044-3	S	S	S	S	S	S												
7/26/2004	LW2-G045	X	X	X	X	X	X												
8/4/2004	LW2-G046	X	X	X	X	X	X												
7/26/2004	LW2-G047	X	X	X	X	X	X												
7/26/2004	LW2-G048	X	X	X	X	X	X												
7/26/2004	LW2-G049	X	X	X	X	X	X												
8/4/2004	LW2-G050	X	X	X	X	X	X												
7/27/2004	LW2-G051	X	XX	X	X	X	X												
7/27/2004	LW2-G052	X	X	X	X	X	X												
8/4/2004	LW2-G053	X	X	X	X	X	X												
8/5/2004	LW2-G054	X	X	X	X	X	X												
7/27/2004	LW2-G055	X	X	X	X	X	X												
7/27/2004	LW2-G056	X	X	X	X	X	X												
8/4/2004	LW2-G057	X	XX	X	X	X	X												
7/27/2004	LW2-G058	X	X	X	X	X	X												
7/27/2004	LW2-G059	X	X	X	X	X	X												
7/20/2004	LW2-G060	X	X	X	X	X	X	X			X	X			X		X	X	X
7/27/2004	LW2-G061	X	X	X		X	X	X			X	X	X		X		X	X	
7/27/2004	LW2-G062	X	X	X	X	X	X	X			X	X	X		X	X	X	X	
8/5/2004	LW2-G063	X	X	X	X	X	X												
7/20/2004	LW2-G064	X	X	X	X	X	X	X			X	X	X		X		X	X	
8/5/2004	LW2-G065	X	X	X	X	X	X												
7/20/2004	LW2-G066	X	X	X	X	X	X	X			X				X		X	X	X
7/27/2004	LW2-G067	X	X	X	X	X	X	X			X	X	X				X	X	
8/5/2004	LW2-G068	X	X	X	X	X	X												
7/27/2004	LW2-G069	X	X	X	X	X	X												
7/29/2004	LW2-G070	X	X	X	X	X	X												
8/2/2004	LW2-G071	X	X	X	X	X	X												
7/29/2004	LW2-G072	X	XX	X	X	X	X												
7/27/2004	LW2-G073	X	X	X	X	X	X	X			X	X	X				X	X	
7/27/2004	LW2-G074	X	X	X	X	X	X	X			X	X	X				X	X	
8/2/2004	LW2-G075-1	X	X	X	X	X	X												
8/2/2004	LW2-G075-2	R	R	R	R	R	R												
7/29/2004	LW2-G076	X	X	X	X	X	X												
8/3/2004	LW2-G077	X	X	X	X	X	X	X							X		X	X	

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB-Aroclors	Metals + Hg + TS + TOC	Ammonia	Cr-VI (Hexavalent Chromium)	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs	PCB Congeners	Dioxins/ Furans	Herbicides & Pentachlorophenol	Total Sulfides	Bioassay	Bioassay & Chemistry - EPA split
7/28/2004	LW2-G078	X	X	X	X	X	X	X		X			X				X	X	
7/28/2004	LW2-G079	X	XX	X	X	X	X	X		X			X				X	X	
7/28/2004	LW2-G080	X	X	X	X	X	X	X		X			X				X	X	
7/27/2004	LW2-G081	X	XX	X	X	X	X												
8/2/2004	LW2-G082	X	X	X	X	X	X	X		X			X				X	X	
7/28/2004	LW2-G083	X	XX	X	X	X	X	X		X			X				X	X	
8/2/2004	LW2-G084	X	X	X		X	X			X			X						
7/28/2004	LW2-G085	X	X	X	X	X	X	X		X			X				X	X	
8/2/2004	LW2-G086	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	
8/2/2004	LW2-G087	X	X	X		X	X			X			X						
8/2/2004	LW2-G088	X	X	X	X	X	X	X		X			X				X	X	
7/28/2004	LW2-G089	X	X	X	X	X	X	X		X			X				X	X	
8/2/2004	LW2-G090	X	X	X	X	X	X	X		X			X				X	X	
8/2/2004	LW2-G091	X	X	X	X	X	X	X		X			X				X	X	
7/28/2004	LW2-G092	X	X	X	X	X	X	X		X			X				X	X	
10/21/2004	LW2-G093	X	X	X	X	X	X	X		X			X				X	X	
10/21/2004	LW2-G094	X	X	X	X	X	X			X			X						
7/29/2004	LW2-G095	X	X	X	X	X	X												
8/3/2004	LW2-G096	X	X	X	X	X	X	X		X			X				X	X	
7/29/2004	LW2-G097	X	X	X	X	X	X												
7/28/2004	LW2-G098	X	XX	X	X	X	X			X							X		
8/3/2004	LW2-G099	X	X	X	X	X	X	X		X			X				X	X	
7/29/2004	LW2-G100	X	X	X	X	X	X												
7/29/2004	LW2-G101	X	XX	X	X	X	X												
7/28/2004	LW2-G102	X	X	X	X	X	X			X							X		
8/3/2004	LW2-G103	X	X	X	X	X	X	X		X			X				X	X	
7/28/2004	LW2-G104	X	X	X	X	X	X												
8/3/2004	LW2-G105	X	X	X	X	X	X	X			X	X			X	X	X	X	
8/3/2004	LW2-G106	X	X	X	X	X	X	X		X			X				X	X	
7/29/2004	LW2-G107	X	X	X	X	X	X												
8/5/2004	LW2-G108	X	X	X	X	X	X												
8/3/2004	LW2-G109	X	X	X	X	X	X	X		X			X				X	X	
7/29/2004	LW2-G110	X	X	X	X	X	X												
7/28/2004	LW2-G111	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	
8/3/2004	LW2-G112	X	X	X	X	X	X	X		X			X				X	X	
7/29/2004	LW2-G113	X	X	X	X	X	X												
8/11/2004	LW2-G114	X	X	X			X				X	X							
8/11/2004	LW2-G115-1	X	X	X			X				X	X	X						
8/11/2004	LW2-G115-2	R	R	R			R				R	R	R						
8/11/2004	LW2-G115-3	S	S	S			S				S	S	S						
8/5/2004	LW2-G116	X	X	X	X	X	X				X	X	X						
8/3/2004	LW2-G117	X	X	X	X	X	X	X									X	X	

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB-Aroclors	Metals + Hg + TS + TOC	Ammonia	Cr-VI (Hexavalent Chromium)	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs	PCB Congeners	Dioxins/ Furans	Herbicides & Pentachlorophenol	Total Sulfides	Bioassay	Bioassay & Chemistry - EPA split
8/16/2004	LW2-G118	X	X	X			X				X	X	X						
8/16/2004	LW2-G119	X	X	X	X	X	X												
8/5/2004	LW2-G120	X	X	X	X	X	X												
8/3/2004	LW2-G121	X	X	X	X	X	X	X			X	X	X				X	X	
8/3/2004	LW2-G122	X	X	X	X	X	X	X			X	X	X				X	X	
9/8/2004	LW2-G123	X	XX	X	X	X	X	X			X	X	X				X	X	
10/7/2004	LW2-G124	X	X	X	X	X	X	X			X	X	X				X	X	
8/3/2004	LW2-G125	X	X	X	X	X	X												
10/7/2004	LW2-G126	X	X	X	X	X	X				X	X	X						
8/9/2004	LW2-G127	X	X	X	X	X	X	X			X	X	X		X	X	X	X	
8/5/2004	LW2-G128	X	X	X	X	X	X												
8/13/2004	LW2-G129	X	X	X	X	X	X												
8/9/2004	LW2-G130	X	X	X	X	X	X	X			X	X	X			X	X	X	
8/13/2004	LW2-G131	X	X	X	X	X	X												
8/13/2004	LW2-G132	X	X	X	X	X	X												
8/9/2004	LW2-G133	X	X	X	X	X	X	X			X	X			X	X	X	X	
8/16/2004	LW2-G134	X	XX	X	X	X	X												
8/13/2004	LW2-G135	X	X	X		X	X				X	X							
8/9/2004	LW2-G136	X	X	X	X	X	X	X			X	X					X	X	
8/16/2004	LW2-G137	X	X	X	X	X	X												
8/13/2004	LW2-G138	X	X	X		X	X				X	X							
8/9/2004	LW2-G139	X	X	X	X	X	X	X			X	X					X	X	
8/10/2004	LW2-G140-1	X	X	X	X	X	X												
8/10/2004	LW2-G140-2	R	R	R	R	R	R												
8/10/2004	LW2-G140-3	S	S	S	S	S	S												
8/16/2004	LW2-G141	X	X	X	X	X	X												
8/9/2004	LW2-G142	X	X	X	X	X	X	X			X	X					X	X	
8/13/2004	LW2-G143	X	X	X	X	X	X												
8/16/2004	LW2-G144	X	X	X			X				X	X	X						
8/16/2004	LW2-G145	X	X	X			X				X	X	X						
8/17/2004	LW2-G146	X	X	X	X	X	X												
8/9/2004	LW2-G147	X	X	X	X	X	X	X			X	X	X				X	X	
8/18/2004	LW2-G148	X	X	X			X				X	X	X						
8/13/2004	LW2-G149	X	X	X	X	X	X												
8/18/2004	LW2-G150	X	XX	X	X	X	X				X	X	X						
8/18/2004	LW2-G152	X	X	X			X				X	X	X						
8/18/2004	LW2-G153	X	X	X	X	X	X												
8/17/2004	LW2-G154	X	X	X	X	X	X												
9/8/2004	LW2-G155	X	X	X	X	X	X	X			X	X					X	X	
8/18/2004	LW2-G156	X	X	X			X				X	X	X						
9/8/2004	LW2-G157	X	X	X	X	X	X	X			X	X	X				X	X	
8/18/2004	LW2-G158	X	X	X			X				X	X	X						

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB-Aroclors	Metals + Hg + TS + TOC	Ammonia	Cr-VI (Hexavalent Chromium)	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs	PCB Congeners	Dioxins/ Furans	Herbicides & Pentachlorophenol	Total Sulfides	Bioassay	Bioassay & Chemistry - EPA split
8/13/2004	LW2-G159	X	X	X	X	X	X												
9/8/2004	LW2-G160	X	X	X	X	X	X	X			X	X	X				X	X	
9/8/2004	LW2-G161	X	X	X	X	X	X	X			X	X	X				X	X	
8/18/2004	LW2-G162	X	X	X			X				X	X	X						
9/8/2004	LW2-G163	X	X	X	X	X	X	X			X	X	X		X	X	X	X	
8/4/2004	LW2-G164	X	X	X	X	X	X	X			X	X				X	X	X	
8/17/2004	LW2-G165	X	XX	X	X	X	X												
9/8/2004	LW2-G166	X	X	X	X	X	X	X			X	X	X				X	X	
8/13/2004	LW2-G168	X	X	X	X	X	X												
8/11/2004	LW2-G169	X	X	X			X				X	X	X						
8/11/2004	LW2-G170	X	X	X	X	X	X	X			X	X	X				X	X	
8/11/2004	LW2-G171	X	XX	X			X				X	X	X						
8/11/2004	LW2-G172	X	X	X	X	X	X	X			X	X	X				X	X	
8/11/2004	LW2-G173	X	X	X			X				X	X	X						
8/11/2004	LW2-G174	X	X	X			X				X	X	X						
8/17/2004	LW2-G175	X	X	X	X	X	X												
8/11/2004	LW2-G176	X	X	X	X	X	X	X			X	X	X				X	X	
8/11/2004	LW2-G177	X	X	X			X				X	X	X						
8/4/2004	LW2-G178	X	X	X	X	X	X	X			X	X					X	X	
8/10/2004	LW2-G179	X	X	X	X	X	X	X			X	X	X				X	X	
8/4/2004	LW2-G180	X	X	X	X	X	X	X			X	X					X	X	
8/17/2004	LW2-G181	X	X	X	X	X	X												
8/10/2004	LW2-G182	X	X	X	X	X	X	X			X	X				X	X	X	
8/11/2004	LW2-G183	X	X	X	X	X	X												
8/10/2004	LW2-G184	X	X	X	X	X	X	X			X	X	X				X	X	
8/18/2004	LW2-G185	X	X	X			X				X	X	X		X	X			
8/17/2004	LW2-G186	X	X	X	X	X	X												
8/10/2004	LW2-G187	X	X	X	X	X	X	X			X	X	X				X	X	
8/17/2004	LW2-G188	X	X	X	X	X	X												
8/18/2004	LW2-G189	X	X	X	X	X	X												
8/17/2004	LW2-G190	X	X	X	X	X	X												
8/18/2004	LW2-G191	X	X	X	X	X	X												
10/21/2004	LW2-G192	X	X	X	X	X	X			X	X	X	X		X	X			
8/13/2004	LW2-G193	X	X	X	X	X	X												
8/11/2004	LW2-G194	X	X	X	X	X	X												
8/18/2004	LW2-G195	X	X	X	X	X	X												
7/19/2004	LW2-G196	X	X	X			X	X		X	X	X	X						
8/25/2004	LW2-G197-1	X	X	X	X	X	X	X			X	X				X	X	X	X
8/26/2004	LW2-G197-2	R		R	R	R	R	R			R	R				R	R		
9/7/2004	LW2-G198	X	X	X	X	X	X	X		X	X	X	X				X	X	
9/7/2004	LW2-G199	X	XX	X	X	X	X	X		X	X	X	X				X	X	
10/21/2004	LW2-G200	X	X	X	X	X	X	X		X			X				X	X	

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB-Aroclors	Metals + Hg + TS + TOC	Ammonia	Cr-VI (Hexavalent Chromium)	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs	PCB Congeners	Dioxins/ Furans	Herbicides & Pentachlorophenol	Total Sulfides	Bioassay	Bioassay & Chemistry - EPA split
9/7/2004	LW2-G202	X	X	X	X	X	X	X		X	X	X	X				X	X	
7/20/2004	LW2-G203-1	X	X	X	X	X	X	X		X	X	X	X				X	X	X
7/20/2004	LW2-G203-2	R	R	R	R	R	R	R		R	R	R	R				R		
7/20/2004	LW2-G203-3	S	S	S	S	S	S	S		S	S	S	S				S		
9/7/2004	LW2-G204	X	X	X	X	X	X	X		X	X	X	X				X	X	
10/29/2004	LW2-G205	X	X	X	X	X	X	X		X			X				X	X	
10/21/2004	LW2-G206	X	X	X	X	X	X	X		X	X	X	X				X	X	
9/7/2004	LW2-G207	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	
8/17/2004	LW2-G208	X	X	X	X	X	X												
9/7/2004	LW2-G209	X	X	X	X	X	X	X			X	X					X	X	
10/21/2004	LW2-G210	X	X	X	X	X	X	X		X	X	X	X		X	X	X	X	
10/28/2004	LW2-G212-1	X	XX	X	X	X	X	X		X			X				X	X	
10/28/2004	LW2-G212-2	R	R	R	R	R	R	R		R			R				R		
10/21/2004	LW2-G213	X	X	X	X	X	X	X		X	X	X					X	X	
7/19/2004	LW2-G214-1	X	X	X	X	X	X												
7/30/2004	LW2-G215	X	X	X	X	X	X			X	X	X	X						
7/30/2004	LW2-G216	X	X	X	X	X	X												
9/10/2004	LW2-G217	X	X	X	X	X	X												
7/30/2004	LW2-G218	X	X	X	X	X	X												
8/17/2004	LW2-G219	X	X	X			X				X	X							
7/22/2004	LW2-G220	X	XX	X	X	X	X	X			X	X					X	X	
7/22/2004	LW2-G221	X	X	X	X	X	X	X			X	X					X	X	
8/17/2004	LW2-G222	X	X	X	X	X	X												
8/17/2004	LW2-G223	X	X	X			X				X	X							
8/17/2004	LW2-G224	X	X	X	X	X	X												
8/17/2004	LW2-G225	X	X	X	X	X	X												
7/30/2004	LW2-G226	X	X	X	X	X	X												
8/10/2004	LW2-G227	X	X	X	X	X	X	X			X	X					X	X	
8/10/2004	LW2-G228	X	X	X	X	X	X	X			X	X					X	X	
8/17/2004	LW2-G229	X	X	X	X	X	X												
8/10/2004	LW2-G230	X	X	X	X	X	X	X			X	X					X	X	
9/7/2004	LW2-G231	X	X	X	X	X	X	X		X	X	X					X	X	
8/30/2004	LW2-G232	X	XX	X	X	X	X	X		X	X	X				X	X	X	
9/10/2004	LW2-G233	X	X	X	X	X	X												
9/7/2004	LW2-G234	X	X	X	X	X	X	X		X	X	X					X	X	
8/4/2004	LW2-G235	X	X	X	X	X	X	X									X	X	
7/30/2004	LW2-G236	X	X	X	X	X	X												
8/17/2004	LW2-G237	X	X	X	X	X	X												
7/30/2004	LW2-G238	X	X	X	X	X	X												
7/30/2004	LW2-G239	X	X	X	X	X	X												
8/12/2004	LW2-G240	X	X	X	X	X	X	X		X	X	X					X	X	
8/18/2004	LW2-G241	X	X	X	X	X	X												

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB-Aroclors	Metals + Hg + TS + TOC	Ammonia	Cr-VI (Hexavalent Chromium)	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs	PCB Congeners	Dioxins/ Furans	Herbicides & Pentachlorophenol	Total Sulfides	Bioassay	Bioassay & Chemistry - EPA split
8/12/2004	LW2-G242	X	X	X	X	X	X	X			X	X					X	X	
7/30/2004	LW2-G243	X	X	X	X	X	X												
9/8/2004	LW2-G244	X	X	X	X	X	X	X									X	X	
8/12/2004	LW2-G245	X	X	X	X	X	X	X		X	X	X			X	X	X	X	
8/12/2004	LW2-G246	X	XX	X	X	X	X												
9/8/2004	LW2-G247	X	XX	X	X	X	X	X			X	X			X	X	X	X	
7/30/2004	LW2-G248	X	X	X	X	X	X												
9/10/2004	LW2-G249	X	X	X	X	X	X												
10/29/2004	LW2-G250-1	X	X	X	X	X	X												
8/12/2004	LW2-G251-1	X	X	X	X	X	X												
8/12/2004	LW2-G251-2	R	R	R	R	R	R												
8/12/2004	LW2-G252	X	X	X	X	X	X				X	X							
8/13/2004	LW2-G253	X	X	X	X	X	X												
9/8/2004	LW2-G254	X	X	X	X	X	X	X									X	X	
8/19/2004	LW2-G255	X	X	X	X	X	X												
8/19/2004	LW2-G256	X	X	X			X				X	X	X						
8/20/2004	LW2-G257	X	X	X	X	X	X												
8/19/2004	LW2-G258	X	X	X	X	X	X				X	X							
8/12/2004	LW2-G259	X	X	X	X	X	X												
9/14/2004	LW2-G260	X	X	X	X	X	X	X			X	X			X	X	X	X	
8/19/2004	LW2-G261	X	X	X	X	X	X												
8/19/2004	LW2-G262	X	X	X			X												
8/30/2004	LW2-G263	X	X	X	X	X	X	X			X	X	X				X	X	
8/30/2004	LW2-G264	X	XX	X	X	X	X	X			X	X	X				X	X	
8/19/2004	LW2-G265	X	X	X			X				X	X							
8/20/2004	LW2-G266	X	X	X	X	X	X												
8/30/2004	LW2-G267	X	X	X	X	X	X	X									X	X	
9/14/2004	LW2-G268	X	X	X	X	X	X	X									X	X	
8/30/2004	LW2-G269	X	X	X	X	X	X	X			X	X	X				X	X	
7/21/2004	LW2-G270-1	X	X	X	X	X	X	X			X	X	X				X	X	X
7/21/2004	LW2-G270-2	R	R	R	R	R	R	R			R	R	R				R		
8/19/2004	LW2-G271	X	X	X	X	X	X												
8/19/2004	LW2-G272	X	X	X	X	X	X				X	X							
10/7/2004	LW2-G273	X	X	X	X	X	X	X			X	X	X				X	X	
10/29/2004	LW2-G274	X	X	X	X	X	X	X			X	X	X				X	X	
8/31/2004	LW2-G275-1	X	XX	X			X			X									
8/31/2004	LW2-G275-2	R	R	R			R			R									
8/30/2004	LW2-G276	X	X	X	X	X	X	X			X	X	X				X	X	
10/11/2004	LW2-G277	X	X	X	X	X	X	X		X	X	X					X	X	
8/30/2004	LW2-G278	X	X	X	X	X	X	X			X	X	X				X	X	
10/11/2004	LW2-G280	X	X	X	X	X	X	X		X							X	X	
8/19/2004	LW2-G281	X	X	X			X				X	X							

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB-Aroclors	Metals + Hg + TS + TOC	Ammonia	Cr-VI (Hexavalent Chromium)	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs	PCB Congeners	Dioxins/ Furans	Herbicides & Pentachlorophenol	Total Sulfides	Bioassay	Bioassay & Chemistry - EPA split
10/22/2004	LW2-G282	X	X	X	X	X	X	X									X	X	
8/30/2004	LW2-G283	X	X	X	X	X	X	X			X	X	X				X	X	
8/30/2004	LW2-G284	X	X	X	X	X	X	X			X	X	X				X	X	
8/19/2004	LW2-G285	X	X	X	X	X	X												
8/19/2004	LW2-G287	X	X	X			X				X	X	X						
9/13/2004	LW2-G288	X	X	X	X	X	X	X			X	X	X				X	X	
8/19/2004	LW2-G289	X	X	X			X				X	X	X						
8/20/2004	LW2-G290	X	X	X			X			X									
8/20/2004	LW2-G291	X	X	X			X			X	X	X							
9/13/2004	LW2-G292	X	X	X	X	X	X	X			X	X	X				X	X	
8/20/2004	LW2-G293	X	X	X	X	X	X			X	X	X							
7/21/2004	LW2-G294-1	X	XX	X	X	X	X	X			X	X	X				X	X	X
7/21/2004	LW2-G294-2	R	R	R	R	R	R	R			R	R	R				R		
7/21/2004	LW2-G294-3	S	S	S	S	S	S	S			S	S	S				S		
10/11/2004	LW2-G295	X	XX	X	X	X	X	X									X	X	
10/28/2004	LW2-G296	X	X	X	X	X	X	X			X	X					X	X	
8/19/2004	LW2-G297	X	X	X			X				X	X	X						
9/13/2004	LW2-G298	X	X	X	X	X	X	X			X	X	X				X	X	
8/19/2004	LW2-G299	X	X	X			X				X	X	X						
8/20/2004	LW2-G300	X	X	X			X				X	X	X						
9/13/2004	LW2-G301	X	X	X	X	X	X	X			X	X	X				X	X	
9/13/2004	LW2-G302	X	X	X	X	X	X	X			X	X	X				X	X	
10/29/2004	LW2-G303	X	X	X	X	X	X	X			X	X					X	X	
8/19/2004	LW2-G305	X	X	X	X	X	X				X	X	X						
8/20/2004	LW2-G306	X	X	X	X	X	X												
8/20/2004	LW2-G307	X	X	X	X	X	X				X	X	X		X	X			
9/13/2004	LW2-G308	X	X	X	X	X	X	X			X	X					X	X	
8/20/2004	LW2-G309	X	X	X	X	X	X				X	X	X						
8/20/2004	LW2-G310	X	X	X	X	X	X												
7/21/2004	LW2-G311-1	X	XX	X	X	X	X	X			X	X	X				X	X	X
7/21/2004	LW2-G311-2	R	R	R	R	R	R	R			R	R	R				R		
7/21/2004	LW2-G311-3	S	S	S	S	S	S	S			S	S	S				S		
8/20/2004	LW2-G313	X	XX	X	X	X	X				X	X	X		X	X			
8/20/2004	LW2-G314	X	X	X	X	X	X				X	X	X		X	X			
9/13/2004	LW2-G315	X	X	X	X	X	X	X			X	X	X		X	X	X	X	
9/13/2004	LW2-G316	X	X	X	X	X	X	X			X	X	X		X	X	X	X	
8/20/2004	LW2-G317	X	X	X	X	X	X				X	X	X		X	X			
9/14/2004	LW2-G318	X	X	X	X	X	X	X									X	X	
8/20/2004	LW2-G319	X	X	X	X	X	X												
9/14/2004	LW2-G320	X	X	X	X	X	X	X			X	X					X	X	
8/25/2004	LW2-G321	X	X	X	X	X	X	X			X	X	X		X	X	X	X	
8/20/2004	LW2-G322	X	X	X	X	X	X												

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB-Aroclors	Metals + Hg + TS + TOC	Ammonia	Cr-VI (Hexavalent Chromium)	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs	PCB Congeners	Dioxins/ Furans	Herbicides & Pentachlorophenol	Total Sulfides	Bioassay	Bioassay & Chemistry - EPA split
9/14/2004	**LW2-G323**	X	X	X	X	X	X	X			X	X	X		X	X	X	X	
7/22/2004	**LW2-G324-1**	X	X	X	X	X	X	X					X		X	X	X	X	X
7/22/2004	**LW2-G324-2**	R	R	R	R	R	R	R					R		R	R	R		
8/20/2004	**LW2-G325**	X	X	X	X	X	X						X		X	X			
8/20/2004	**LW2-G326**	X	XX	X	X	X	X						X		X	X			
9/14/2004	**LW2-G327**	X	X	X	X	X	X	X					X		X	X	X	X	
8/20/2004	**LW2-G328**	X	X	X	X	X	X												
8/25/2004	**LW2-G329**	X	X	X	X	X	X	X					X		X	X	X	X	
8/20/2004	**LW2-G330**	X	X	X	X	X	X	X		X			X		X	X			
9/14/2004	**LW2-G331**	X	X	X	X	X	X	X					X		X	X	X	X	
8/26/2004	**LW2-G332**	X	X	X	X	X	X						X		X	X			
9/14/2004	**LW2-G333**	X	X	X	X	X	X	X					X		X	X	X	X	
7/22/2004	**LW2-G334**	X	X	X	X	X	X	X					X		X	X	X	X	X
9/14/2004	**LW2-G335**	X	X	X	X	X	X	X					X		X	X	X	X	
9/14/2004	**LW2-G336**	X	X	X	X	X	X	X									X	X	
8/26/2004	**LW2-G337**	X	X	X	X		X		X										
8/26/2004	**LW2-G338**	X	X	X	X	X	X												
9/1/2004	**LW2-G339**	X	X	X	X	X	X	X			X	X					X	X	
8/26/2004	**LW2-G340**	X	X	X	X	X	X												
8/26/2004	**LW2-G341**	X	X	X	X		X		X										
10/11/2004	**LW2-G342**	X	XX	X	X	X	X	X		X	X	X					X	X	
8/26/2004	**LW2-G343**	X	X	X	X		X		X										
8/26/2004	**LW2-G344**	X	X	X	X		X		X										
7/22/2004	**LW2-G345-1**	X	X	X	X	X	X	X			X	X					X	X	X
7/22/2004	**LW2-G345-2**	R	R	R	R	R	R	R			R	R					R		
7/22/2004	**LW2-G345-3**	S	S	S	S	S	S	S			S	S					S		
10/11/2004	**LW2-G346**	X	X	X	X	X	X	X		X	X	X					X	X	
10/11/2004	**LW2-G347**	X	X	X	X	X	X	X		X	X	X					X	X	
9/14/2004	**LW2-G348**	X	X	X	X	X	X	X	X				X				X	X	
8/26/2004	**LW2-G349**	X	XX	X	X		X		X										
9/14/2004	**LW2-G350**	X	XX	X	X	X	X	X			X	X	X				X	X	
10/22/2004	**LW2-G351**	X	X	X	X	X	X	X	X		X	X			X	X	X	X	
10/28/2004	**LW2-G351-2**	X	X	X	X	X	X	X	X		X	X			X	X	X		
10/28/2004	**LW2-G351-3**	S	S	S	S	S	S	S	S		S	S			S	S	S	S	
10/11/2004	**LW2-G352**	X	X	X	X	X	X	X		X	X	X					X	X	
8/23/2004	**LW2-G353-1**	X	X	X	X	X	X	X			X	X	X				X	X	X
8/23/2004	**LW2-G353-2**	R	R	R	R	R	R	R			R	R	R				R		
8/26/2004	**LW2-G354**	X	X	X	X	X	X	X											
10/29/2004	**LW2-G355**	X	X	X	X	X	X	X			X	X	X				X	X	
8/26/2004	**LW2-G356**	X	X	X	X		X		X				X						
8/26/2004	**LW2-G357**	X	X	X	X		X	X	X										
8/23/2004	**LW2-G358**	X	X	X	X	X	X												

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB-Aroclors	Metals + Hg + TS + TOC	Ammonia	Cr-VI (Hexavalent Chromium)	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs	PCB Congeners	Dioxins/ Furans	Herbicides & Pentachlorophenol	Total Sulfides	Bioassay	Bioassay & Chemistry - EPA split
8/25/2004	LW2-G359	X	X	X	X	X	X	X	X	X			X				X	X	
10/28/2004	LW2-G360	X	X	X	X	X	X	X	X				X				X	X	
8/23/2004	LW2-G361	X	X	X	X		X		X										
10/22/2004	LW2-G362-1	X	X	X	X	X	X	X	X								X	X	
10/22/2004	LW2-G362-2	R	R	R	R	R	R	R	R								R		
10/22/2004	LW2-G362-3	S	S	S	S	S	S	S	S								S		
9/3/2004	LW2-G363	X	XX	X	X	X	X												
10/8/2004	LW2-G364	X	X	X	X	X	X	X		X							X	X	
8/26/2004	LW2-G365	X	X	X	X	X	X	X											
10/22/2004	LW2-G366	X	X	X	X	X	X	X	X								X	X	
10/29/2004	LW2-G367	X	X	X	X	X	X	X			X	X					X	X	
10/8/2004	LW2-G368	X	XX	X	X	X	X	X	X								X	X	
8/26/2004	LW2-G369	X	X	X	X	X	X	X											
9/9/2004	LW2-G370	X	X	X	X	X	X												
10/22/2004	LW2-G371	X	X	X	X	X	X	X			X	X					X	X	
8/24/2004	LW2-G372-1	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X
8/24/2004	LW2-G372-2	R	R	R	R	R	R	R		R	R	R			R	R	R		
8/24/2004	LW2-G372-3	S	S	S	S	S	S	S		S	S	S			S	S	S		
8/23/2004	LW2-G373	X	X	X		X	X			X									
8/26/2004	LW2-G374	X	X	X	X	X	X	X							X				
8/27/2004	LW2-G375	X	X	X		X	X			X									
10/29/2004	LW2-G376	X	X	X	X	X	X	X			X	X					X	X	
10/22/2004	LW2-G377	X	X	X	X	X	X	X			X	X			X	X	X	X	
8/27/2004	LW2-G378	X	X	X	X	X	X												
9/9/2004	LW2-G379	X	X	X	X	X	X			X									
10/22/2004	LW2-G380	X	X	X	X	X	X	X		X							X	X	
8/26/2004	LW2-G381	X	X	X	X	X	X				X	X	X						
10/8/2004	LW2-G382	X	X	X	X	X	X	X		X	X	X					X	X	
10/8/2004	LW2-G383	X	X	X	X	X	X	X			X	X				X	X	X	
8/23/2004	LW2-G384-1	X	XX	X	X	X	X	X		X	X	X					X	X	X
8/23/2004	LW2-G384-2	R	R	R	R	R	R	R		R	R	R					R		
8/23/2004	LW2-G384-3	S	S	S	S	S	S	S		S	S	S					S		
10/29/2004	LW2-G385	X	X	X	X	X	X	X		X	X	X					X	X	
9/1/2004	LW2-G386	X	X	X	X	X	X	X		X							X	X	
8/23/2004	LW2-G387	X	X	X	X	X	X	X			X	X					X	X	X
9/9/2004	LW2-G388	X	X	X		X	X			X									
10/29/2004	LW2-G389	X	X	X	X	X	X	X									X	X	
8/23/2004	LW2-G390	X	XX	X	X	X	X	X			X	X					X	X	X
8/27/2004	LW2-G391	X	X	X	X	X	X												
10/8/2004	LW2-G392	X	XX	X	X	X	X	X		X	X	X					X	X	
10/22/2004	LW2-G393	X	X	X	X	X	X	X		X							X	X	
8/27/2004	LW2-G394	X	X	X	X	X	X												

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

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8/27/2004	LW2-G395	X	X	X	X	X	X												
10/11/2004	LW2-G396	X	X	X	X	X	X	X		X							X	X	
8/24/2004	LW2-G397	X	XX	X	X	X	X			X	X	X			X	X			
8/24/2004	LW2-G398	X	X	X	X	X	X	X			X	X					X	X	X
8/27/2004	LW2-G399	X	X	X	X	X	X												
8/27/2004	LW2-G400	X	X	X		X	X			X									
10/22/2004	LW2-G401	X	X	X	X	X	X	X			X	X				X	X	X	
9/9/2004	LW2-G402	X	X	X		X	X			X	X	X							
10/22/2004	LW2-G403	X	X	X	X	X	X	X			X	X	X		X	X	X	X	
8/27/2004	LW2-G404	X	XX	X	X	X	X				X	X	X						
10/11/2004	LW2-G405	X	X	X	X	X	X	X			X	X				X	X	X	
8/27/2004	LW2-G406	X	X	X	X	X	X												
9/9/2004	LW2-G407	X	X	X	X	X	X												
10/29/2004	LW2-G408	X	X	X	X	X	X	X			X	X					X	X	
10/8/2004	LW2-G409	X	X	X	X	X	X	X								X	X	X	
9/9/2004	LW2-G410-1	X	X	X	X	X	X												
9/9/2004	LW2-G410-2	R	R	R	R	R	R												
10/8/2004	LW2-G411	X	X	X	X	X	X			X									
8/27/2004	LW2-G412	X	X	X	X	X	X												
10/22/2004	LW2-G413	X	X	X	X	X	X	X									X	X	
8/27/2004	LW2-G414	X	X	X	X	X	X												
10/22/2004	LW2-G415	X	X	X	X	X	X	X		X							X	X	
10/29/2004	LW2-G416	X	XX	X	X	X	X	X			X	X					X	X	
10/22/2004	LW2-G417	X	X	X	X	X	X	X		X							X	X	
8/27/2004	LW2-G418	X	X	X	X	X	X												
8/27/2004	LW2-G419	X	X	X	X	X	X												
10/8/2004	LW2-G420	X	X	X	X	X	X	X			X	X			X	X	X	X	
9/9/2004	LW2-G421	X	X	X		X	X			X									
8/27/2004	LW2-G422	X	X	X	X	X	X												
8/27/2004	LW2-G423	X	X	X	X	X	X												
10/8/2004	LW2-G424	X	XX	X	X	X	X												
10/7/2004	LW2-G425	X	X	X	X	X	X	X			X	X				X	X	X	
10/11/2004	LW2-G426	X	X	X	X	X	X	X		X	X	X			X	X	X	X	
8/27/2004	LW2-G427	X	X	X	X	X	X												
8/27/2004	LW2-G428	X	X	X	X	X	X												
8/27/2004	LW2-G429	X	X	X	X	X	X												
10/22/2004	LW2-G430	X	X	X	X	X	X	X			X	X				X	X	X	
10/7/2004	LW2-G431	X	XX	X	X	X	X			X									
8/27/2004	LW2-G432	X	X	X	X	X	X				X	X				X			
9/9/2004	LW2-G433-1	X	XX	X	X	X	X												
9/9/2004	LW2-G433-2	R	R	R	R	R	R												
8/27/2004	LW2-G434	X	X	X	X	X	X			X									

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8/27/2004	LW2-G435	X	X	X	X	X	X												
8/27/2004	LW2-G436	X	X	X		X	X			X									
10/22/2004	LW2-G437	X	X	X	X	X	X	X		X	X	X			X	X	X	X	
8/27/2004	LW2-G438	X	X	X	X	X	X												
9/9/2004	LW2-G439	X	X	X	X	X	X			X			X						
8/31/2004	LW2-G440	X	X	X		X	X			X									
8/25/2004	LW2-G441	X	X	X	X	X	X	X		X			X				X	X	
8/27/2004	LW2-G442	X	X	X	X	X	X												
8/24/2004	LW2-G443	X	X	X	X	X	X												
8/25/2004	LW2-G444	X	X	X	X	X	X	X		X			X				X	X	
8/25/2004	LW2-G445	X	X	X	X	X	X	X		X	X	X	X				X	X	
9/1/2004	LW2-G446	X	X	X	X	X	X												
8/31/2004	LW2-G447	X	X	X		X	X			X	X	X							
8/31/2004	LW2-G448	X	X	X		X	X			X	X	X							
8/24/2004	LW2-G449	X	X	X		X	X			X									
8/25/2004	LW2-G450-1	X	X	X	X	X	X	X		X	X	X			X	X	X	X	X
8/25/2004	LW2-G450-2	R	R	R	R	R	R	R		R	R	R			R	R	R		
9/1/2004	LW2-G451	X	XX	X	X	X	X												
8/24/2004	LW2-G452	X	X	X		X	X			X									
8/31/2004	LW2-G453	X	XX	X	X	X	X	X		X	X	X					X	X	
9/1/2004	LW2-G454	X	X	X	X	X	X	X			X	X			X	X	X	X	
8/25/2004	LW2-G455	X	X	X	X	X	X	X			X	X				X	X	X	X
8/31/2004	LW2-G456	X	X	X	X	X	X	X		X							X	X	
8/31/2004	LW2-G457	X	X	X	X	X	X	X		X							X	X	
8/24/2004	LW2-G458	X	X	X	X	X	X	X		X							X	X	
9/1/2004	LW2-G459	X	X	X	X	X	X												
8/24/2004	LW2-G460	X	X	X		X	X			X									
8/31/2004	LW2-G461	X	X	X	X	X	X	X		X							X	X	
8/24/2004	LW2-G462	X	X	X		X	X			X									
9/1/2004	LW2-G463	X	XX	X	X	X	X												
8/24/2004	LW2-G464	X	X	X		X	X			X									
9/1/2004	LW2-G465	X	X	X	X	X	X												
8/31/2004	LW2-G466	X	X	X	X	X	X												
9/1/2004	LW2-G467	X	X	X	X	X	X	X		X							X	X	
8/31/2004	LW2-G468	X	XX	X	X	X	X	X		X							X	X	
8/24/2004	LW2-G469	X	X	X	X	X	X	X		X							X	X	
9/1/2004	LW2-G470	X	X	X	X	X	X												
8/31/2004	LW2-G471	X	X	X		X	X			X									
9/1/2004	LW2-G472	X	X	X	X	X	X												
9/1/2004	LW2-G473	X	X	X	X	X	X	X		X	X	X					X	X	
8/24/2004	LW2-G474	X	X	X	X	X	X	X		X	X	X				X	X	X	
9/1/2004	LW2-G475-1	X	X	X	X	X	X												

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB-Aroclors	Metals + Hg + TS + TOC	Ammonia	Cr-VI (Hexavalent Chromium)	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs	PCB Congeners	Dioxins/ Furans	Herbicides & Pentachlorophenol	Total Sulfides	Bioassay	Bioassay & Chemistry - EPA split
9/1/2004	LW2-G475-2	R	R	R	R	R	R												
9/1/2004	LW2-G476	X	X	X	X	X	X												
9/1/2004	LW2-G477	X	X	X	X	X	X	X		X	X	X					X	X	
8/31/2004	LW2-G478	X	XX	X	X	X	X												
8/31/2004	LW2-G479	X	X	X	X	X	X												
9/1/2004	LW2-G480	X	X	X	X	X	X	X		X							X	X	
9/2/2004	LW2-G481	X	X	X	X	X	X												
8/31/2004	LW2-G482	X	X	X	X	X	X												
8/31/2004	LW2-G483	X	XX	X	X	X	X												
9/2/2004	LW2-G484	X	XX	X	X	X	X												
8/31/2004	LW2-G485	X	X	X	X	X	X												
8/31/2004	LW2-G486	X	X	X	X	X	X												
9/2/2004	LW2-G487	X	X	X	X	X	X												
8/31/2004	LW2-G488	X	X	X	X	X	X												
8/31/2004	LW2-G489	X	X	X	X	X	X												
9/2/2004	LW2-G490	X	XX	X	X	X	X												
9/2/2004	LW2-G491	X	X	X	X	X	X												
8/24/2004	LW2-G492-1	X	X	X	X	X	X	X								X	X	X	X
8/24/2004	LW2-G492-2	R	R	R	R	R	R	R								R	R		
8/24/2004	LW2-G492-3	S	S	S	S	S	S	S								S	S		
9/3/2004	LW2-G493	X	X	X	X	X	X												
9/3/2004	LW2-G494	X	XX	X	X	X	X												
9/2/2004	LW2-G495	X	X	X	X	X	X												
9/2/2004	LW2-G496	X	X	X	X	X	X												
8/24/2004	LW2-G497	X	X	X	X	X	X	X			X	X					X	X	X
9/2/2004	LW2-G498	X	X	X	X	X	X												
9/3/2004	LW2-G499	X	X	X	X	X	X												
9/3/2004	LW2-G500	X	X	X	X	X	X												
9/2/2004	LW2-G501	X	X	X	X	X	X												
9/3/2004	LW2-G502	X	X	X	X	X	X												
9/2/2004	LW2-G503	X	X	X	X	X	X												
9/3/2004	LW2-G504	X	X	X	X	X	X												
9/3/2004	LW2-G505	X	X	X	X	X	X												
9/3/2004	LW2-G506	X	XX	X	X	X	X												
9/3/2004	LW2-G507	X	X	X	X	X	X												
9/3/2004	LW2-G508	X	X	X	X	X	X												
9/3/2004	LW2-G509	X	X	X	X	X	X												
9/3/2004	LW2-G510	X	X	X	X	X	X												
9/3/2004	LW2-G511	X	X	X	X	X	X												
9/3/2004	LW2-G512	X	X	X	X	X	X												
9/3/2004	LW2-G513	X	X	X	X	X	X												
9/3/2004	LW2-G514	X	XX	X	X	X	X												

Table 3-3. Round 2A Surface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB-Aroclors	Metals + Hg + TS + TOC	Ammonia	Cr-VI (Hexavalent Chromium)	TBT	$TPH_{diesel\text{-}oil}$	$TPH_{gasoline}$	VOCs	PCB Congeners	Dioxins/ Furans	Herbicides & Pentachlorophenol	Total Sulfides	Bioassay	Bioassay & Chemistry - EPA split
9/3/2004	**LW2-G515**	X	X	X	X	X	X												
9/3/2004	**LW2-G516**	X	X	X	X	X	X												
9/3/2004	**LW2-G517**	X	X	X	X	X	X												
9/3/2004	**LW2-G518**	X	X	X	X	X	X												
8/16/2004	**LW2-G519-1**	X	X	X	X	X	X												
8/16/2004	**LW2-G519-2**	R	R	R	R	R	R												
9/10/2004	**LW2-G520**	X	X	X	X	X	X												
9/13/2004	**LW2-G521**	X	X	X	X	X	X				X	X	X						
Ambient Upstream at Downstream Stations																			
11/4/2004	**LW2-U3C-1**	X		X	X	X	X	X							X		X	X	
11/4/2004	**LW2-U3C-2**	R		X	X	X	X	X							X		X	X	
11/4/2004	**LW2-U3C-3**	R		X	X	X	X	X							X		X	X	
11/4/2004	**LW2-U5Q-1**	X		X	X	X	X	X							X		X	X	
11/4/2004	**LW2-U5Q-2**	R		X	X	X	X	X							X		X	X	
11/4/2004	**LW2-U5Q-3**	R		X	X	X	X	X							X		X	X	
11/4/2004	**LW2-U6TOC-1**	X		X	X	X	X	X							X		X	X	
11/4/2004	**LW2-U6TOC-2**	R		X	X	X	X	X							X		X	X	
11/4/2004	**LW2-U6TOC-3**	R		X	X	X	X	X							X		X	X	
11/4/2004	**LW2-U4Q-1**	X		X	X	X	X	X							X		X	X	
11/4/2004	**LW2-U4Q-2**	R		X	X	X	X	X							X		X	X	
11/4/2004	**LW2-U4Q-3**	R		X	X	X	X	X							X		X	X	
11/5/2004	**LW2-U2C-1**	X		X	X	X	X	X							X		X	X	
11/5/2004	**LW2-U2C-2**	R		X	X	X	X	X							X		X	X	
11/5/2004	**LW2-U2C-3**	X		X	X	X	X	X							X		X	X	
11/5/2004	**LW2-U1C-1**	X		X	X	X	X	X							X		X	X	
11/5/2004	**LW2-U1C-2**	R		X	X	X	X	X							X		X	X	
11/5/2004	**LW2-U1C-3**	R		X	X	X	X	X							X		X	X	
11/5/2004	**LW2-D1-1**	X		X	X	X	X	X							X		X	X	
11/5/2004	**LW2-D1-2**	R		R	R	R	R	R							R		R		
11/5/2004	**LW2-D1-3**	S		S	S	S	S	S							S		S		
11/5/2004	**LW2-D2**	X		X	X	X	X	X							X		X	X	

Notes:

[a]Atterberg Limits were analyzed on 55 (10%) of the surface grab samples following review of sediment textures at all stations.

R - Field Replicate, incicated by a "-2" in sample ID.

S - Homogenate Split, indicated by a "-3" in Sample ID.

XX - sample selected for Atterberg limits analysis.

Blank shaded cells indicate a missing analysis.

Shaded cells with a bold "X" indicate an analysis added in the field.

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel\text{-}oil}$	$TPH_{gasoline}$	VOCs
09/24/04	LW2-C009-B	X	X	X	X	X	X	X			X	X	
09/24/04	LW2-C009-C	X	X	X	X	X	X	X			X	X	
11/01/04	LW2-C011-B1[b]	X	X	X	X	X	X	X			X	X	
11/01/04	LW2-C011-B2	X	X	X	X	X	X	X			X	X	
11/01/04	LW2-C011-B3[b]	S	S	S	S	S	S	S			S	S	
11/01/04	LW2-C011-C1	X	X	X	X	X	X	X			X	X	
11/01/04	LW2-C011-C2	X	X	X	X	X	X	X			X	X	
11/01/04	LW2-C011-C3	S	S	S	S	S	S	S			S	S	
11/01/04	LW2-C011-D1	X	X	X	X	X	X	X			X	X	
11/01/04	LW2-C011-D2	X	X	X	X	X	X	X			X	X	
11/01/04	LW2-C011-D3	S	S	S	S	S	S	S			S	S	
11/01/04	LW2-C011-E2	X	X	X	X	X	X	X			X	X	
11/01/04	LW2-C011-F1											X	
11/01/04	LW2-C011-F3											S	
11/01/04	LW2-C011-G2											X	
09/24/04	LW2-C015-B	X	X	X	X	X	X	X			X	X	
09/24/04	LW2-C015-C	X	X	X	X	X	X	X			X	X	
09/24/04	LW2-C015-D	X	X	X	X	X	X	X			X	X	
09/24/04	LW2-C015-E											X	
09/24/04	LW2-C019-B	X	X	X	X	X	X	X			X	X	
09/24/04	LW2-C019-C	X	X	X	X	X	X	X			X	X	
09/24/04	LW2-C019-D											X	
11/02/04	LW2-C019-E											X	
09/24/04	LW2-C020-B	X	XX	X	X	X	X	X			X	X	
09/24/04	LW2-C020-C	X	X	X	X	X	X	X			X	X	
09/24/04	LW2-C020-D											X	
09/24/04	LW2-C022-B	X	XX	X	X	X	X	X			X	X	
09/24/04	LW2-C022-C	X	X	X	X	X	X	X			X	X	
09/24/04	LW2-C022-D											X	
09/24/04	LW2-C025-B	X	X	X	X	X	X	X			X	X	
09/24/04	LW2-C025-C	X	X	X	X	X	X	X			X	X	
09/24/04	LW2-C025-D											X	
11/02/04	LW2-C025-D	X	X	X	X	X	X	X			X	X	
11/02/04	LW2-C025-E											X	
09/29/04	LW2-C027-B	X	X	X	X	X	X	X			X	X	
09/29/04	LW2-C027-C	X	X	X	X	X	X	X			X	X	
09/29/04	LW2-C027-D											X	
09/29/04	LW2-C034-B	X	X	X	X	X	X	X			X	X	
09/29/04	LW2-C034-C	X	X	X	X	X	X	X			X	X	
09/29/04	LW2-C034-E	X	X	X	X	X	X	X			X	X	

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs
09/29/04	LW2-C034-F											X	
11/01/04	LW2-C038-B	X	X	X	X	X	X	X			X	X	
11/01/04	LW2-C038-C	X	X	X	X	X	X	X			X	X	
11/01/04	LW2-C038-D	X	X	X	X	X	X	X			X	X	
11/01/04	LW2-C038-E											X	
09/29/04	LW2-C060-A	A	A										
09/29/04	LW2-C060-B	X	X	X	X	X	X	X			X	X	X
09/29/04	LW2-C060-C	X	X	X	X	X	X	X			X	X	X
09/28/04	LW2-C061-B	X	X	X			X	X			X	X	X
09/28/04	LW2-C061-C	X	X	X			X	X			X	X	X
09/28/04	LW2-C061-E	X	X	X			X	X			X	X	X
11/01/04	LW2-C062-B	X	X	X	X	X	X	X			X	X	X
11/01/04	LW2-C062-C	X	X	X	X	X	X	X			X	X	X
11/01/04	LW2-C062-D	X	X	X	X	X	X	X			X	X	X
11/02/04	LW2-C064-B	X	X	X	X	X	X	X			X	X	X
11/02/04	LW2-C064-C	X	X	X	X	X	X	X			X	X	X
11/02/04	LW2-C064-G											X	X
11/02/04	LW2-C066-A	A	A										
11/02/04	LW2-C066-B	X	X	X	X	X	X	X					
11/02/04	LW2-C066-C	X	X	X	X	X	X	X					
11/02/04	LW2-C066-D												
11/02/04	LW2-C066-E												
11/02/04	LW2-C066-F	X	X										
11/02/04	LW2-C067-B	X	XX	X	X	X	X	X			X	X	X
11/02/04	LW2-C067-D	X	X	X	X	X	X	X			X	X	X
11/02/04	LW2-C067-E	X	X	X	X	X	X	X			X	X	X
09/30/04	LW2-C073-B	X	X	X	X	X	X	X			X	X	X
09/30/04	LW2-C073-C	X	X	X	X	X	X	X			X	X	X
09/30/04	LW2-C073-D	X	X	X	X	X	X	X			X	X	X
11/03/04	LW2-C074-B	X	X	X	X	X	X	X			X	X	X
11/03/04	LW2-C074-C	X	X	X	X	X	X	X			X	X	X
11/03/04	LW2-C074-D	X	X	X	X	X	X	X			X	X	X
11/03/04	LW2-C074-F	X	X	X	X	X	X	X			X	X	X
09/30/04	LW2-C077-C	X	X	X	X	X	X	X					
09/30/04	LW2-C077-D	X	X	X	X	X	X	X					
09/30/04	LW2-C086-B	X	X	X	X	X	X	X		X	X	X	X
09/30/04	LW2-C086-C	X	X	X	X	X	X	X		X	X	X	X
09/30/04	LW2-C086-D											X	X
10/20/04	LW2-C093-A[b]	A	A	A	A	A	A	A		A			A
10/20/04	LW2-C093-B	X	X	X	X	X	X	X		X			X
10/20/04	LW2-C093-C	X	XX	X	X	X	X	X		X			X

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs
10/20/04	LW2-C093-D											X	
11/02/04	LW2-C105-B	X	X	X	X	X	X	X			X	X	
11/02/04	LW2-C105-C	X	X	X	X	X	X	X			X	X	
11/02/04	LW2-C105-F											X	
11/02/04	LW2-C111-B	X	X	X	X	X	X	X		X	X	X	X
11/03/04	LW2-C111-B2	X	X	X	X	X	X	X		X	X	X	X
11/02/04	LW2-C111-C[b]	X	X	X	X	X	X	X		X	X	X	X
11/03/04	LW2-C111-C2	X	X	X	X	X	X	X		X	X	X	X
11/03/04	LW2-C111-E2	X	X	X	X	X	X	X		X	X	X	X
11/02/04	LW2-C111-F	X	X	X	X	X	X	X		X	X	X	X
11/02/04	LW2-C112-B	X	X	X	X	X	X	X		X			X
11/02/04	LW2-C112-C	X	X	X	X	X	X	X		X			X
11/02/04	LW2-C112-D	X	X	X	X	X	X	X		X			X
09/30/04	LW2-C121-B	X	X	X	X	X	X	X			X	X	X
09/30/04	LW2-C121-C	[c]	X	X	X	X	X	X			X	X	X
09/30/04	LW2-C121-D											X	X
11/03/04	LW2-C122-B	X	X	X	X	X	X	X			X	X	X
11/03/04	LW2-C122-C	X	X	X	X	X	X	X			X	X	X
11/03/04	LW2-C130-B[d]	X	X	X	X	X	X	X			X	X	
11/03/04	LW2-C130-C	X	X	X	X	X	X	X			X	X	
11/03/04	LW2-C130-D											X	
11/03/04	LW2-C130-E	X	X	X	X	X	X	X			X	X	
11/03/04	LW2-C130-F											X	
09/23/04	LW2-C133-B	X	X	X	X	X	X	X			X	X	
09/23/04	LW2-C133-D	X	X	X	X	X	X	X			X	X	
09/23/04	LW2-C135-B	X	X	X		X	X	X			X	X	
09/23/04	LW2-C135-C	X	X	X		X	X	X			X	X	
09/23/04	LW2-C135-D											X	
11/03/04	LW2-C136-B	X	X	X	X	X	X	X			X	X	
11/03/04	LW2-C136-C	X	X	X	X	X	X	X			X	X	
11/03/04	LW2-C136-D	X	X	X	X	X	X	X			X	X	
09/30/04	LW2-C138-B											X	
09/30/04	LW2-C138-C	X	X	X		X	X	X			X	X	
09/30/04	LW2-C138-D											X	
09/30/04	LW2-C139-B	X	XX	X	X	X	X	X			X	X	
09/30/04	LW2-C139-C	X	X	X	X	X	X	X			X	X	
09/30/04	LW2-C139-D											X	
11/03/04	LW2-C142-B	X	X	X	X	X	X	X			X	X	
11/03/04	LW2-C142-C	X	X	X	X	X	X	X			X	X	
09/29/04	LW2-C144-A	A	A										
09/29/04	LW2-C144-B	X	X	X			X	X			X	X	X

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs
09/29/04	LW2-C144-C	X	X										
09/29/04	LW2-C144-D	X	X	X			X	X			X	X	X
09/29/04	LW2-C144-E	X	X										X
11/03/04	LW2-C147-B	X	X	X	X	X	X	X			X	X	X
11/03/04	LW2-C147-C	X	X	X	X	X	X	X			X	X	X
11/03/04	LW2-C147-E	X	X	X	X	X	X	X			X	X	X
09/28/04	LW2-C148-B	X	X	X			X	X			X	X	X
09/28/04	LW2-C148-C	X	XX	X			X	X			X	X	X
09/28/04	LW2-C148-E											X	X
09/28/04	LW2-C152-B	X	X	X			X	X			X	X	X
09/28/04	LW2-C152-C	X	X	X			X	X			X	X	X
09/28/04	LW2-C152-E											X	X
10/05/04	LW2-C155-B	X	X	X	X	X	X	X			X	X	X
10/05/04	LW2-C155-C	X	X	X	X	X	X	X			X	X	X
10/05/04	LW2-C155-D											X	X
09/28/04	LW2-C156-B	X	X	X			X	X			X	X	X
09/28/04	LW2-C156-C	X	X	X			X	X			X	X	X
09/28/04	LW2-C156-F											X	X
09/29/04	LW2-C157-B	X	X	X	X	X	X	X			X	X	X
09/29/04	LW2-C157-C	X	X	X	X	X	X	X			X	X	X
09/28/04	LW2-C158-B	X	X	X			X	X			X	X	X
09/28/04	LW2-C158-C	X	X	X			X	X			X	X	X
09/28/04	LW2-C158-D	X	X	X			X	X			X	X	X
09/28/04	LW2-C158-E											X	X
09/29/04	LW2-C160-B	X	X	X	X	X	X	X			X	X	X
09/29/04	LW2-C160-C	X	X	X	X	X	X	X			X	X	X
09/29/04	LW2-C161-B	X	X	X	X	X	X	X			X	X	X
09/29/04	LW2-C161-C	X	X	X	X	X	X	X			X	X	X
09/29/04	LW2-C161-D											X	X
09/28/04	LW2-C162-B	X	XX	X			X	X			X	X	X
09/28/04	LW2-C162-C	X	X	X			X	X			X	X	X
09/28/04	LW2-C162-D											X	X
09/29/04	LW2-C163-B1	X	X	X	X	X	X	X			X	X	X
09/29/04	LW2-C163-B2	X	X	X	X	X	X	X			X	X	X
09/29/04	LW2-C163-B3[d]	S	S	S	S	S	S	S			S	S	S
09/29/04	LW2-C163-C1	X	X	X	X	X	X	X			X	X	X
09/29/04	LW2-C163-C2	X	X	X	X	X	X	X			X	X	X
09/29/04	LW2-C163-C3	S	S	S	S	S	S	S			S	S	S
09/29/04	LW2-C163-D1											X	X
09/29/04	LW2-C163-D2											X	X
09/29/04	LW2-C163-D3											S	S

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs
11/03/04	LW2-C164-B	X	X	X	X	X	X	X			X	X	
11/03/04	LW2-C164-C	X	X	X	X	X	X	X			X	X	
11/03/04	LW2-C164-E	X	X	X	X	X	X	X			X	X	
09/29/04	LW2-C166-B	X	X	X	X	X	X	X			X	X	X
09/29/04	LW2-C166-C	X	X	X	X	X	X	X			X	X	X
09/29/04	LW2-C166-D	X	X	X	X	X	X	X			X	X	X
09/22/04	LW2-C169-B	X	X	X			X	X			X	X	X
09/22/04	LW2-C169-C	X	X	X			X	X			X	X	X
09/22/04	LW2-C169-D											X	X
09/23/04	LW2-C170-B	X	X	X	X	X	X	X			X	X	X
09/23/04	LW2-C170-C	X	X	X	X	X	X	X			X	X	X
09/23/04	LW2-C170-D											X	X
09/22/04	LW2-C171-B	X	X	X	X	X	X	X			X	X	X
09/22/04	LW2-C171-C	X	X	X	X	X	X	X			X	X	X
09/22/04	LW2-C171-D											X	X
09/23/04	LW2-C172-B	X	X	X	X	X	X	X			X	X	X
09/23/04	LW2-C172-C	X	X	X	X	X	X	X			X	X	X
09/23/04	LW2-C172-E											X	X
09/23/04	LW2-C173-B	X	X	X			X	X			X	X	X
09/23/04	LW2-C173-C	X	X	X			X	X			X	X	X
09/23/04	LW2-C173-E											X	X
11/04/04	LW2-C176-B	X	X	X	X	X	X	X			X	X	X
11/04/04	LW2-C176-C	X	X	X	X	X	X	X			X	X	X
11/04/04	LW2-C176-G	X	X	X	X	X	X	X			X	X	X
10/01/04	LW2-C179-B	X	X	X	X	X	X	X			X	X	X
10/01/04	LW2-C179-C	X	X	X	X	X	X	X			X	X	X
10/01/04	LW2-C179-D	X	X	X	X	X	X	X			X	X	X
09/23/04	LW2-C182-B	X	X	X	X	X	X	X			X	X	
09/23/04	LW2-C182-C	X	X	X	X	X	X	X			X	X	
09/23/04	LW2-C182-D											X	
11/04/04	LW2-C184-B	X	X	X	X	X	X	X			X	X	X
11/04/04	LW2-C184-C	X	X	X	X	X	X	X			X	X	X
11/04/04	LW2-C184-D	X	X	X	X	X	X	X			X	X	X
11/04/04	LW2-C184-E											X	X
09/23/04	LW2-C185-B	X	X	X			X	X			X	X	X
09/23/04	LW2-C185-C	X	X	X			X	X			X	X	X
09/23/04	LW2-C185-D											X	X
10/25/04	LW2-C192-B	X	X	X	X	X	X	X		X	X	X	X
10/25/04	LW2-C192-C	X	X	X	X	X	X	X		X	X	X	X
10/25/04	LW2-C192-D	X	X	X	X	X	X	X		X	X	X	X
09/30/04	LW2-C196-B	X	X	X			X	X		X	X	X	X

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel\text{-}oil}$	$TPH_{gasoline}$	VOCs
09/30/04	LW2-C196-C	X	X	X			X	X		X	X	X	X
10/27/04	LW2-C197-B	X	XX	X	X	X	X	X			X	X	
10/27/04	LW2-C197-C	X	X	X	X	X	X	X			X	X	
10/27/04	LW2-C197-D	X	X	X	X	X	X	X			X	X	
10/27/04	LW2-C197-E											X	
10/28/04	LW2-C199-B	X	X	X	X	X	X	X		X	X	X	X
10/28/04	LW2-C199-C	X	X	X	X	X	X	X		X	X	X	X
10/28/04	LW2-C199-E											X	X
09/30/04	LW2-C202-B	X	X	X	X	X	X	X		X	X	X	X
09/30/04	LW2-C202-C	X	X	X	X	X	X	X		X	X	X	X
09/30/04	LW2-C202-D											X	X
09/30/04	LW2-C203-B	X	X	X	X	X	X	X		X	X	X	X
09/30/04	LW2-C203-C	X	X	X	X	X	X	X		X	X	X	X
09/30/04	LW2-C203-E	X	X	X	X	X	X	X		X	X	X	X
10/25/04	LW2-C206-B	X	X	X	X	X	X	X		X	X	X	X
10/25/04	LW2-C206-C	X	X	X	X	X	X	X		X	X	X	X
10/25/04	LW2-C206-D											X	X
09/30/04	LW2-C207-B	X	XX	X	X	X	X	X		X	X	X	X
10/01/04	LW2-C207-B2[b]	X	X	X	X	X	X	X		X	X	X	X
10/01/04	LW2-C207-B3[b]	S	S	S	S	S	S	S		S	S	S	S
09/30/04	LW2-C207-C	X	X	X	X	X	X	X		X	X	X	X
10/01/04	LW2-C207-C2	X	X	X	X	X	X	X		X	X	X	X
10/01/04	LW2-C207-C3	S	S	S	S	S	S	S		S	S	S	S
09/30/04	LW2-C207-D	X	X	X	X	X	X	X		X	X	X	X
11/04/04	LW2-C210-B	X	X	X	X	X	X	X		X	X	X	X
11/04/04	LW2-C210-C	X	X	X	X	X	X	X		X	X	X	X
11/04/04	LW2-C210-E											X	X
10/25/04	LW2-C213-B	X	X	X	X	X	X	X		X			X
10/25/04	LW2-C213-C	X	X	X	X	X	X	X		X			X
10/25/04	LW2-C213-D	X	X	X	X	X	X	X		X			X
09/21/04	LW2-C215-B	X	X	X			X	X		X	X	X	X
09/21/04	LW2-C215-C	X	X	X			X	X		X	X	X	X
10/01/04	LW2-C220-B	X	X	X	X	X	X	X			X	X	
10/01/04	LW2-C220-C	X	X	X	X	X	X	X			X	X	
10/01/04	LW2-C221-A	A	A										
10/01/04	LW2-C221-B	X	X	X	X	X	X	X			X	X	
10/01/04	LW2-C221-C	X	X	X	X	X	X	X			X	X	
10/01/04	LW2-C221-D	X	X									X	
10/27/04	LW2-C228-B	X	X	X	X	X	X	X		X	X	X	
10/27/04	LW2-C231-B	X	X	X	X	X	X	X		X	X	X	
10/27/04	LW2-C231-C	X	X	X	X	X	X	X		X	X	X	

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel\text{-}oil}$	$TPH_{gasoline}$	VOCs
11/08/04	LW2-C232-B	X	X	X	X	X	X	X			X	X	
11/08/04	LW2-C232-C	X	X	X	X	X	X	X			X	X	
09/21/04	LW2-C240-B	X	X	X	X	X	X	X		X	X	X	
09/21/04	LW2-C240-D	X	X	X	X	X	X	X		X	X	X	
09/21/04	LW2-C240-E	X	X	X	X	X	X	X		X	X	X	
10/01/04	LW2-C244-B	X	X	X	X	X	X	X					
10/01/04	LW2-C244-C	X	X	X	X	X	X	X					
10/28/04	LW2-C245-B	X	X	X	X	X	X	X		X	X	X	
10/28/04	LW2-C245-C	X	X	X	X	X	X	X		X	X	X	
10/28/04	LW2-C245-D	X	X	X	X	X	X	X		X	X	X	
10/28/04	LW2-C245-E	X	X	X	X	X	X	X		X	X	X	
10/28/04	LW2-C245-F											X	
11/11/04	LW2-C247-B	X	X	X	X	X	X	X			X	X	
11/11/04	LW2-C247-C	X	X	X	X	X	X	X			X	X	
11/11/04	LW2-C247-D	X	X	X	X	X	X	X			X	X	
11/11/04	LW2-C247-E											X	
09/23/04	LW2-C252-B	X	X	X	X	X	X	X			X	X	
09/23/04	LW2-C252-C	X	X	X	X	X	X	X			X	X	
09/23/04	LW2-C252-D											X	
10/18/04	LW2-C254-B	X	X	X	X	X	X	X					
10/18/04	LW2-C254-C	X	X	X	X	X	X	X					
10/27/04	LW2-C255-A	A	A										
10/27/04	LW2-C255-B[e]	X	X	X	X	X	X	X					
10/27/04	LW2-C255-C[e]	X	X	X	X	X	X	X					
10/27/04	LW2-C257-B[e]	X	X	X	X	X	X	X					
09/23/04	LW2-C258-B	X	X	X	X	X	X	X			X	X	
09/23/04	LW2-C258-C	X	X	X	X	X	X	X			X	X	
09/23/04	LW2-C258-D											X	
10/05/04	LW2-C260-B	X	X	X	X	X	X	X			X	X	
10/05/04	LW2-C260-C[b]	X	X	X	X	X	X	X			X	X	
10/05/04	LW2-C260-D											X	
10/01/04	LW2-C263-B	X	X	X	X	X	X	X			X	X	X
10/01/04	LW2-C263-C											X	X
10/01/04	LW2-C263-D	X	X	X	X	X	X	X			X	X	X
09/23/04	LW2-C264-B	X	X	X	X	X	X	X			X	X	X
09/23/04	LW2-C264-C	X	X	X	X	X	X	X			X	X	X
09/23/04	LW2-C264-D											X	X
10/05/04	LW2-C266-B[e]	X	X	X	X	X	X	X					
10/05/04	LW2-C266-C[e]	X	X	X	X	X	X	X					
10/18/04	LW2-C267-B	X	X	X	X	X	X	X					
10/18/04	LW2-C267-C	X	X	X	X	X	X	X					

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel\text{-}oil}$	$TPH_{gasoline}$	VOCs
10/19/04	LW2-C268-B[e]	X	X	X	X	X	X	X					
10/19/04	LW2-C268-C[e]	X	X	X	X	X	X	X					
10/28/04	LW2-C269-B	X	X	X	X	X	X	X			X	X	X
10/28/04	LW2-C269-C	X	X	X	X	X	X	X			X	X	X
10/28/04	LW2-C269-F	X	X	X	X	X	X	X			X	X	X
09/21/04	LW2-C270-B	X	X	X	X	X	X	X			X	X	X
09/21/04	LW2-C270-C	X	X	X	X	X	X	X			X	X	X
09/21/04	LW2-C270-D												
09/22/04	LW2-C272-B	X	X	X	X	X	X	X			X	X	
09/22/04	LW2-C272-C	X	X	X	X	X	X	X			X	X	
10/20/04	LW2-C273-B	X	XX	X	X	X	X	X			X	X	X
10/20/04	LW2-C273-C	X	X	X	X	X	X	X			X	X	X
10/20/04	LW2-C273-D											X	X
09/22/04	LW2-C276-B	X	X	X	X	X	X	X			X	X	X
09/22/04	LW2-C276-C	X	X	X	X	X	X	X			X	X	X
09/22/04	LW2-C276-D											X	X
10/19/04	LW2-C277-B	X	X	X	X	X	X	X		X	X	X	
10/19/04	LW2-C277-C	X	X	X	X	X	X	X		X	X	X	
10/19/04	LW2-C277-D	X	X	X	X	X	X	X		X	X	X	
10/19/04	LW2-C278-B	X	XX	X	X	X	X	X			X	X	X
10/19/04	LW2-C278-C	X	X	X	X	X	X	X			X	X	X
10/19/04	LW2-C278-D	X	X	X	X	X	X	X			X	X	X
10/20/04	LW2-C280-B	X	X	X	X	X	X	X		X			
10/20/04	LW2-C280-C	X	X	X	X	X	X	X		X			
10/20/04	LW2-C280-D	X	X	X	X	X	X	X		X			
11/11/04	LW2-C282-B	X	X	X	X	X	X	X					
11/11/04	LW2-C282-C	X	X	X	X	X	X	X					
11/11/04	LW2-C282-D	X	X	X	X	X	X	X					
11/08/04	LW2-C283-B	X	X	X	X	X	X	X			X	X	X
11/08/04	LW2-C283-C	X	X	X	X	X	X	X			X	X	X
11/08/04	LW2-C283-E	X	X	X	X	X	X	X			X	X	X
09/22/04	LW2-C284-B	X	X	X	X	X	X	X			X	X	X
09/22/04	LW2-C284-C	X	X	X	X	X	X	X			X	X	X
09/22/04	LW2-C284-D	X	X	X	X	X	X	X			X	X	X
09/22/04	LW2-C284-E											X	X
10/20/04	LW2-C288-B	X	X	X	X	X	X	X			X	X	X
10/20/04	LW2-C288-C	X	X	X	X	X	X	X			X	X	X
10/20/04	LW2-C288-D	X	X	X	X	X	X	X			X	X	X
10/19/04	LW2-C289-B	X	X	X			X	X			X	X	X
10/19/04	LW2-C289-C	X	X	X			X	X			X	X	X
10/19/04	LW2-C289-E	X	X	X			X	X			X	X	X

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs
10/19/04	**LW2-C290-B**	X	X	X			X	X		X			
10/19/04	**LW2-C290-C**	X	X	X			X	X		X			
10/19/04	**LW2-C291-A**	A	A										
10/19/04	**LW2-C291-B**	X	X	X			X	X		X	X	X	
10/19/04	**LW2-C291-C**	X	X	X			X	X		X	X	X	
10/18/04	**LW2-C293-B**	X	XX	X	X	X	X	X		X	X	X	
10/19/04	**LW2-C293-B2**	X	X	X	X	X	X	X		X	X	X	
10/18/04	**LW2-C293-C**	X	X	X	X	X	X	X		X	X	X	
10/19/04	**LW2-C293-C2**	X	X	X	X	X	X	X		X	X	X	
10/18/04	**LW2-C293-D**	X	X	X	X	X	X	X		X	X	X	
10/18/04	**LW2-C293-D2**											X	
10/19/04	**LW2-C294-B**	X	X	X	X	X	X	X			X	X	X
10/19/04	**LW2-C294-C**	X	X	X	X	X	X	X			X	X	X
10/19/04	**LW2-C294-D**	X	X	X	X	X	X	X			X	X	X
10/20/04	**LW2-C295-B**	X	XX	X	X	X	X	X					
10/20/04	**LW2-C295-C**	X	X	X	X	X	X	X					
09/22/04	**LW2-C299-B**	X	X	X			X	X			X	X	X
09/22/04	**LW2-C299-C**	X	X	X			X	X			X	X	X
10/27/04	**LW2-C300-B**	X	X	X			X	X			X	X	X
10/27/04	**LW2-C300-C**	X	X	X			X	X			X	X	X
10/27/04	**LW2-C300-D**	X	X	X			X	X			X	X	X
11/08/04	**LW2-C301-B**	X	X	X	X	X	X	X			X	X	X
11/08/04	**LW2-C301-C**	X	X	X	X	X	X	X			X	X	X
11/08/04	**LW2-C301-D**	X	X	X	X	X	X	X			X	X	X
11/08/04	**LW2-C301-E**	X	X	X	X	X	X	X			X	X	X
11/08/04	**LW2-C301-G**	X	X	X	X	X	X	X			X	X	X
09/22/04	**LW2-C302-B**	X	X	X	X	X	X	X			X	X	X
09/22/04	**LW2-C302-C**	X	X	X	X	X	X	X			X	X	X
09/22/04	**LW2-C302-D**											X	X
10/19/04	**LW2-C305-B1**	X	X	X	X	X	X	X			X	X	X
10/19/04	**LW2-C305-B2**	X	X	X	X	X	X	X			X	X	X
10/19/04	**LW2-C305-C1**	X	X	X	X	X	X	X			X	X	X
10/19/04	**LW2-C305-C2**	X	X	X	X	X	X	X			X	X	X
10/19/04	**LW2-C305-D1**	X	X	X	X	X	X	X			X	X	X
10/19/04	**LW2-C305-D2**	X	X	X	X	X	X	X			X	X	X
11/09/04	**LW2-C311-B**	X	X	X	X	X	X	X			X	X	X
11/09/04	**LW2-C311-C**	X	X	X	X	X	X	X			X	X	X
11/09/04	**LW2-C311-E**	X	X	X	X	X	X	X			X	X	X
09/28/04	**LW2-C313-B**	X	X	X	X	X	X	X			X	X	X
09/28/04	**LW2-C313-C**	X	X	X	X	X	X	X			X	X	X
09/28/04	**LW2-C314-B**	X	XX	X	X	X	X	X			X	X	X

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs
09/28/04	**LW2-C314-C**	X	X	X	X	X	X	X			X	X	X
09/28/04	**LW2-C314-D**											X	X
10/04/04	**LW2-C316-B**	X	X	X	X	X	X	X			X	X	X
10/04/04	**LW2-C316-C**	X	X	X	X	X	X	X			X	X	X
10/04/04	**LW2-C316-D**	X	X	X	X	X	X	X			X	X	X
09/27/04	**LW2-C323-B**	X	X	X	X	X	X	X			X	X	X
09/27/04	**LW2-C323-C**	X	X	X	X	X	X	X			X	X	X
09/27/04	**LW2-C323-D**	X	X	X	X	X	X	X			X	X	X
09/27/04	**LW2-C323-E**											X	X
09/27/04	**LW2-C324-B**	X	X	X	X	X	X	X					X
09/27/04	**LW2-C324-D**	X	X	X	X	X	X	X					X
09/27/04	**LW2-C324-E**	X	X	X	X	X	X	X					X
09/27/04	**LW2-C326-B**	X	X	X	X	X	X	X					X
09/27/04	**LW2-C326-C**	X	X	X	X	X	X	X					X
09/27/04	**LW2-C326-D**												X
09/27/04	**LW2-C327-B**	X	X	X	X	X	X	X					X
09/27/04	**LW2-C327-C**	X	X	X	X	X	X	X					X
09/27/04	**LW2-C327-D**												X
09/28/04	**LW2-C329-B**	X	X	X	X	X	X	X					X
09/28/04	**LW2-C329-C**	X	X	X	X	X	X	X					X
09/28/04	**LW2-C329-D**	X	X	X	X	X	X	X					X
11/09/04	**LW2-C331-B**	X	X	X	X	X	X	X					X
11/09/04	**LW2-C331-C**	X	X	X	X	X	X	X					X
11/09/04	**LW2-C331-D**	X	X	X	X	X	X	X					X
11/09/04	**LW2-C331-E**	X	X	X	X	X	X	X					X
11/09/04	**LW2-C331-G**												X
09/28/04	**LW2-C332-B**	X	X	X	X	X	X	X					X
09/28/04	**LW2-C332-C**	X	X	X	X	X	X	X					X
09/28/04	**LW2-C332-D**												X
09/27/04	**LW2-C333-B**	X	X	X	X	X	X	X					X
09/27/04	**LW2-C333-C**	X	X	X	X	X	X	X					X
09/27/04	**LW2-C333-E**	X	X	X	X	X	X	X					X
09/27/04	**LW2-C333-G**												X
09/27/04	**LW2-C334-B**	X	X	X	X	X	X	X					X
09/27/04	**LW2-C334-C**	X	X	X	X	X	X	X					X
09/27/04	**LW2-C334-D**												X
10/05/04	**LW2-C335-B**	X	X	X[e]	X	X	X	X				**X**	X
10/05/04	**LW2-C335-C**	X	X	X[e]	X	X	X	X					X
10/05/04	**LW2-C335-E**												X
10/04/04	**LW2-C341-B**	X	XX	X	X		X	X	X				
10/20/04	**LW2-C342-A**	A	A										

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs
10/20/04	LW2-C342-B	X	X	X	X	X	X	X		X	X	X	
10/20/04	LW2-C342-C	X	X	X	X	X	X	X		X	X	X	
10/20/04	LW2-C342-D	X	X	X	X	X	X	X		X	X	X	
10/20/04	LW2-C342-E	X	X									X	
10/20/04	LW2-C346-B	X	X	X	X	X	X	X		X	X	X	
10/20/04	LW2-C346-C	X	X	X	X	X	X	X		X	X	X	
10/20/04	LW2-C346-D											X	
10/20/04	LW2-C347-B	X	X	X	X	X	X	X		X	X	X	
10/20/04	LW2-C347-C	X	X	X	X	X	X	X		X	X	X	
10/20/04	LW2-C347-F	X	X	X	X	X	X	X		X	X	X	
11/09/04	LW2-C348-B	X	X	X	X	X	X	X	X				X
11/09/04	LW2-C348-C	X	X	X	X	X	X	X	X				X
11/09/04	LW2-C348-D	X	X	X	X	X	X	X	X				X
10/04/04	LW2-C349-B[b]	X	X	X	X		X	X	X				
10/04/04	LW2-C349-C	X	X	X	X		X	X	X				
10/04/04	LW2-C349-D								X				
11/09/04	LW2-C351-B	X	X	X	X	X	X	X	X		X	X	
11/09/04	LW2-C351-C	X	X	X	X	X	X	X	X		X	X	
11/09/04	LW2-C351-D	X	X	X	X	X	X	X	X		X	X	
11/09/04	LW2-C351-E	X	X	X	X	X	X	X	X		X	X	
10/20/04	LW2-C352-B	X	X	X	X	X	X	X		X	X	X	
10/20/04	LW2-C352-C	X	X	X	X	X	X	X		X	X	X	
10/20/04	LW2-C352-D	X	X	X	X	X	X	X		X	X	X	
11/09/04	LW2-C356-B	X	XX	X	X		X	X	X				X
11/09/04	LW2-C356-C	X	X	X	X		X	X	X				X
11/09/04	LW2-C356-E	X	X	X	X		X	X	X				X
10/04/04	LW2-C357-B	X	X	X	X		X	X	X				
10/04/04	LW2-C357-C	X	X	X	X		X	X	X				
10/04/04	LW2-C357-D								X				
10/21/04	LW2-C359-A								A				
10/21/04	LW2-C359-B	X	X	X	X	X	X	X	X				X
10/21/04	LW2-C359-C	X	X	X	X	X	X	X	X				X
10/21/04	LW2-C359-D	X	X	X	X	X	X	X	X				X
10/04/04	LW2-C361-B	X	X	X	X		X	X	X				
10/26/04	LW2-C362-B	X	X	X	X	X	X	X	X				
10/26/04	LW2-C362-C	X	X	X	X	X	X	X	X				
10/26/04	LW2-C362-D	X	X	X	X	X	X	X	X				
10/26/04	LW2-C364-B	X	X	X	X	X	X	X		X			
10/26/04	LW2-C364-C	X	X	X	X	X	X	X		X			
11/09/04	LW2-C366-B1	X	X	X	X	X	X	X	X				
11/09/04	LW2-C366-B2	X	X	X	X	X	X	X	X				

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel\text{-}oil}$	$TPH_{gasoline}$	VOCs
11/09/04	LW2-C366-B3	S	S	S	S	S	S	S	S				
11/09/04	LW2-C366-C1	X	X	X	X	X	X	X	X				
11/09/04	LW2-C366-C2	X	X	X	X	X	X	X	X				
11/09/04	LW2-C366-C3	S	S	S	S	S	S	S	S				
11/09/04	LW2-C366-D1[d]	X	X	X	X	X	X	X	X				
11/09/04	LW2-C366-D2	X	X	X	X	X	X	X	X				
11/09/04	LW2-C366-D3[d]	S	S	S	S	S	S	S	S				
11/09/04	LW2-C366-E1	X	X	X	X	X	X	X	X				
11/09/04	LW2-C366-E3	S	S	S	S	S	S	S	S				
11/09/04	LW2-C366-F2	X	X	X	X	X	X	X	X				
11/09/04	LW2-C366-G1[d]	X	X	X	X	X	X	X	X				
11/09/04	LW2-C366-G3[d]	S	S	S	S	S	S	S	S				
10/26/04	LW2-C368-B	X	X	X	X	X	X	X	X				
10/26/04	LW2-C368-C	X	X	X	X	X	X	X	X				
10/26/04	LW2-C368-D	X	X	X	X	X	X	X	X				
10/26/04	LW2-C368-E	X	X	X	X	X	X	X	X				
11/10/04	LW2-C371-B	X	X	X	X	X	X	X			X	X	
11/10/04	LW2-C371-C	X	X	X	X	X	X	X			X	X	
11/10/04	LW2-C371-E	X	X	X	X	X	X	X			X	X	
10/07/04	LW2-C372 -B	X	X	X	X	X	X	X		X	X	X	
10/07/04	LW2-C372 -C	X	X	X	X	X	X	X		X	X	X	
10/07/04	LW2-C372 -E											X	
10/20/04	LW2-C373-B	X	X	X		X	X	X		X			
10/20/04	LW2-C373-C	X	X	X		X	X	X		X			
11/10/04	LW2-C377-B	X	X	X	X	X	X	X			X	X	
11/10/04	LW2-C377-C	X	X	X	X	X	X	X			X	X	
11/10/04	LW2-C377-E	X	X	X	X	X	X	X			X	X	
10/07/04	LW2-C379-B	X	X	X	X	X	X	X		X			
10/07/04	LW2-C379-C	X	X	X	X	X	X	X		X			
10/07/04	LW2-C379-D	X	X	X	X	X	X	X		X			
11/10/04	LW2-C380-B	X	X	X	X	X	X	X		X			
11/10/04	LW2-C380-C	X	X	X	X	X	X	X		X			
10/21/04	LW2-C382-B	X	X	X	X	X	X	X		X	X	X	
10/21/04	LW2-C382-C	X	X	X	X	X	X	X		X	X	X	
10/21/04	LW2-C382-D											X	
10/21/04	LW2-C383-B	X	X	X	X	X	X	X			X	X	
10/21/04	LW2-C383-C	X	X	X	X	X	X	X			X	X	
10/21/04	LW2-C383-D											X	
10/07/04	LW2-C384 -B	X	XX	X	X	X	X	X		X	X	X	
10/07/04	LW2-C384 -C	X	X	X	X	X	X	X		X	X	X	
10/07/04	LW2-C384 -F											X	

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs
10/06/04	LW2-C386-B	X	X	X	X	X	X	X		X			
10/06/04	LW2-C386-C	X	X	X	X	X	X	X		X			
10/07/04	LW2-C388-B	X	X	X		X	X	X		X			
10/07/04	LW2-C388-C	X	X	X		X	X	X		X			
10/21/04	LW2-C392-B	X	X	X	X	X	X	X		X	X	X	
10/21/04	LW2-C392-C	X	X	X	X	X	X	X		X	X	X	
10/21/04	LW2-C392-D											X	
10/25/04	LW2-C393-B	X	X	X	X	X	X	X		X			
10/25/04	LW2-C393-C	X	X	X	X	X	X	X		X			
10/21/04	LW2-C396-B	X	X	X	X	X	X	X		X			
10/21/04	LW2-C396-C	X	X	X	X	X	X	X		X			
10/07/04	LW2-C397-A	A	A										
10/07/04	LW2-C397-B	X	X	X	X	X	X	X		X	X	X	
10/07/04	LW2-C397-C			X	X	X	X	X		X	X	X	
10/07/04	LW2-C397-D			X	X	X	X	X		X	X	X	
10/07/04	LW2-C400-A	A	A										
10/07/04	LW2-C400-B	X	X	X		X	X	X		X			
10/07/04	LW2-C400-C	X	X	X		X	X	X		X			
10/07/04	LW2-C400-D	X	X										
11/10/04	LW2-C401-B	X	XX	X	X	X	X	X			X	X	
11/10/04	LW2-C401-C	X	X	X	X	X	X	X			X	X	
11/10/04	LW2-C401-D	X	X	X	X	X	X	X			X	X	
11/10/04	LW2-C401-E	X	X	X	X	X	X	X			X	X	
11/10/04	LW2-C401-F											X	
10/07/04	LW2-C402-B	X	X	X		X	X	X		X	X	X	
10/07/04	LW2-C402-C	X	X	X		X	X	X		X	X	X	
10/07/04	LW2-C402-D											X	
11/10/04	LW2-C403-B	X	X	X	X	X	X	X			X	X	X
11/10/04	LW2-C403-C	X	X	X	X	X	X	X			X	X	X
11/10/04	LW2-C403-D	X	X	X	X	X	X	X			X	X	X
11/10/04	LW2-C403-F											X	X
10/26/04	LW2-C405-B	X	X	X	X	X	X	X			X	X	
10/26/04	LW2-C405-C	X	X	X	X	X	X	X			X	X	
10/26/04	LW2-C405-E											X	
10/26/04	LW2-C409-B	X	X	X	X	X	X	X					
10/26/04	LW2-C409-C	X	X	X	X	X	X	X					
10/26/04	LW2-C413-B1	X	X	X	X	X	X	X					
10/26/04	LW2-C413-B2	X	X	X	X	X	X	X					
10/26/04	LW2-C413-C1	X	X	X	X	X	X	X					
10/26/04	LW2-C413-C2	X	X	X	X	X	X	X					
10/26/04	LW2-C413-D2	X	X	X	X	X	X	X					

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs
11/10/04	LW2-C415-B	X	X	X	X	X	X	X		X			
11/10/04	LW2-C415-C	X	X	X	X	X	X	X		X			
11/10/04	LW2-C415-D	X	X	X	X	X	X	X		X			
10/26/04	LW2-C417-B	X	XX	X	X	X	X	X					
10/26/04	LW2-C417-D	X	X	X	X	X	X	X					
10/06/04	LW2-C420-A	A	A										
10/06/04	LW2-C420-B	X	X	X	X	X	X	X			X	X	
10/06/04	LW2-C420-C	X	X	X	X	X	X	X			X	X	
10/06/04	LW2-C420-D	X	X									X	
10/07/04	LW2-C421-B	X	X	X		X	X	X		X			
10/07/04	LW2-C421-C	X	X	X		X	X	X		X			
10/26/04	LW2-C425-B1	X	X	X	X	X	X	X			X	X	
10/26/04	LW2-C425-B2	X	X	X	X	X	X	X			X	X	
10/26/04	LW2-C425-B3	S	S	S	S	S	S	S			S	S	
10/26/04	LW2-C425-C1[b]	X	X	X	X	X	X	X			X	X	
10/26/04	LW2-C425-C2	X	X	X	X	X	X	X			X	X	
10/26/04	LW2-C425-C3[b]	S	S	S	S	S	S	S			S	S	
10/26/04	LW2-C425-D2	X	X	X	X	X	X	X			X	X	
10/26/04	LW2-C425-E1	X	X	X	X	X	X	X			X	X	
10/26/04	LW2-C425-E3	S	S	S	S	S	S	S			S	S	
10/26/04	LW2-C425-F1											X	
10/26/04	LW2-C425-F3											S	
10/25/04	LW2-C426-B	X	X	X	X	X	X	X		X	X	X	
10/25/04	LW2-C426-C	X	X	X	X	X	X	X		X	X	X	
10/25/04	LW2-C426-D											X	
11/10/04	LW2-C430-B	X	X	X	X	X	X	X			X	X	
11/10/04	LW2-C430-C	X	X	X	X	X	X	X			X	X	
11/10/04	LW2-C430-E	X	X	X	X	X	X	X			X	X	
11/10/04	LW2-C431-B	X	X	X	X	X	X	X		X			
11/10/04	LW2-C431-C	X	X	X	X	X	X	X		X			
11/10/04	LW2-C431-D	X	X	X	X	X	X	X		X			
11/11/04	LW2-C434-B	X	X	X	X	X	X	X		X			
11/11/04	LW2-C434-C	X	X	X	X	X	X	X		X			
11/11/04	LW2-C434-D	X	X	X	X	X	X	X		X			
10/07/04	LW2-C436-B	X	XX	X		X	X	X		X			
10/07/04	LW2-C436-C	X	X	X		X	X	X		X			
11/11/04	LW2-C437-B	X	X	X	X	X	X	X		X	X	X	
11/11/04	LW2-C437-C	X	X	X	X	X	X	X		X	X	X	
11/11/04	LW2-C437-D	X	X	X	X	X	X	X		X	X	X	
11/11/04	LW2-C437-F											X	
10/06/04	LW2-C439-B	X	X	X	X	X	X	X		X			X

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel\text{-}oil}$	$TPH_{gasoline}$	VOCs
10/06/04	LW2-C439-C	X	X	X	X	X	X	X		X			X
10/06/04	LW2-C439-E												X
10/06/04	LW2-C440-B	X	XX	X		X	X	X		X			
10/06/04	LW2-C440-C	X	X	X		X	X	X		X			
10/06/04	LW2-C441-B1	X	X	X	X	X	X	X		X			X
10/06/04	LW2-C441-B2[b]	X	X	X	X	X	X	X		X			X
10/06/04	LW2-C441-B3	S	S	S	S	S	S	S		S			S
10/06/04	LW2-C441-C1	X	X	X	X	X	X	X		X			X
10/06/04	LW2-C441-C2	X	X	X	X	X	X	X		X			X
10/06/04	LW2-C441-C3	S	S	S	S	S	S	S		S			S
10/06/04	LW2-C441-D1												X
10/06/04	LW2-C441-D2												X
10/06/04	LW2-C441-D3												S
10/06/04	LW2-C444-B	X	X	X	X	X	X	X		X			X
10/06/04	LW2-C444-C	X	X	X	X	X	X	X		X			X
10/06/04	LW2-C444-E												X
11/11/04	LW2-C445-B	X	X	X	X	X	X	X		X	X	X	X
11/11/04	LW2-C445-C	X	X	X	X	X	X	X		X	X	X	X
11/11/04	LW2-C445-E	X	X	X	X	X	X	X		X	X	X	X
10/06/04	LW2-C447-B	X	X	X		X	X	X		X	X	X	
10/06/04	LW2-C447-C	X	X	X		X	X	X		X	X	X	
10/06/04	LW2-C447-D	X	X	X		X	X	X		X	X	X	
10/06/04	LW2-C447-F											X	
10/26/04	LW2-C448-B	X	X	X		X	X	X		X	X	X	
10/26/04	LW2-C448-C	X	X	X		X	X	X		X	X	X	
10/26/04	LW2-C448-D											X	
10/06/04	LW2-C450 -B	X	X	X	X	X	X	X		X	X	X	
10/06/04	LW2-C450 -C	X	X	X	X	X	X	X		X	X	X	
10/06/04	LW2-C453-B	X	X	X	X	X	X	X		X	X	X	
10/06/04	LW2-C453-C	X	X	X	X	X	X	X		X	X	X	
10/06/04	LW2-C453-D	X	X	X	X	X	X	X		X	X	X	
10/28/04	LW2-C454-B	X	X	X	X	X	X	X			X	X	
10/28/04	LW2-C454-C	X	X	X	X	X	X	X			X	X	
10/28/04	LW2-C454-D	X	X	X	X	X	X	X			X	X	
10/28/04	LW2-C454-E	X	X	X	X	X	X	X			X	X	
10/28/04	LW2-C454-H											X	
11/11/04	LW2-C455-B	X	X	X	X	X	X	X			X	X	
11/11/04	LW2-C455-C	X	X	X	X	X	X	X			X	X	
11/11/04	LW2-C455-D	X	X	X	X	X	X	X			X	X	
11/11/04	LW2-C455-F											X	
10/28/04	LW2-C456-B	X	X	X	X	X	X	X		X			

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel\text{-}oil}$	$TPH_{gasoline}$	VOCs
10/28/04	LW2-C456-C	X	X	X	X	X	X	X		X			
10/28/04	LW2-C456-D	X	X	X	X	X	X	X		X			
10/28/04	LW2-C456-F	X	X	X	X	X	X	X		X			
10/06/04	LW2-C457-B	X	X	X	X	X	X	X		X			
10/06/04	LW2-C457-C	X	X	X	X	X	X	X		X			
10/06/04	LW2-C457-E	X	X	X	X	X	X	X		X			
10/05/04	LW2-C458-B	X	X	X	X	X	X	X		X			
10/05/04	LW2-C458-B2	X	X	X	X	X	X	X		X			
10/05/04	LW2-C458-B3	S	S	S	S	S	S	S		S			
10/05/04	LW2-C458-C	X	X	X	X	X	X	X		X			
10/05/04	LW2-C458-C2	X	X	X	X	X	X	X		X			
10/05/04	LW2-C458-C3	S	S	S	S	S	S	S		S			
10/05/04	LW2-C461-B	X	X	X	X	X	X	X		X			
10/05/04	LW2-C461-C	X	X	X	X	X	X	X		X			
10/05/04	LW2-C462-B	X	X	X		X	X	X		X			
10/05/04	LW2-C462-C	X	X	X		X	X	X		X			
10/06/04	LW2-C468-B	X	X	X	X	X	X	X		X			
10/06/04	LW2-C468-C	X	X	X	X	X	X	X		X			
10/05/04	LW2-C471-A	A	A										
10/05/04	LW2-C471-B	X	X	X		X	X	X		X			
10/05/04	LW2-C471-C	X	XX	X		X	X	X		X			
10/05/04	LW2-C471-D	X	X										
10/05/04	LW2-C474-B	X	X	X	X	X	X	X		X	X	X	
10/05/04	LW2-C474-C	X[e]	X	X	X	X	X	X		X	X	X	
10/05/04	LW2-C474-D											X	
10/28/04	LW2-C477-B	X	X	X	X	X	X	X		X	X	X	
10/28/04	LW2-C477-C	X	X	X	X	X	X	X		X	X	X	
10/28/04	LW2-C494-B	X	X	X	X	X	X	X					
10/28/04	LW2-C494-C	X	X	X	X	X	X	X					
10/28/04	LW2-C494-D	X	X	X	X	X	X	X					
10/28/04	LW2-C494-E	X	X	X	X	X	X	X					
10/19/04	LW2-C521-B	X	X	X			X	X			X	X	X
10/19/04	LW2-C521-C	X	X	X			X	X			X	X	X
10/19/04	LW2-C521-E	X	X	X			X	X			X	X	X
10/21/04	NA-1B-0046	N	N	N	N	N		N			N	N	N
10/21/04	NA-1B-4668	N	N	N	N	N		N			N	N	N
10/21/04	NA-1B-6894	N	N	N	N	N		N			N	N	N
10/21/04	NA-2B-0031	N	N	N	N	N		N			N	N	N
10/21/04	NA-2B-3157	N	N	N	N	N		N			N	N	N

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs
10/21/04	NA-2B-5794	N	N	N	N	N		N			N	N	N
10/22/04	NA-3B-0034	N	N	N	N	N		N			N	N	N
10/22/04	NA-3B-3464	N	N	N	N	N		N			N	N	N
10/22/04	NA-3B-6494	N	N	N	N	N		N			N	N	N
10/21/04	NA-4B-0024	N	N	N	N	N		N			N	N	N
10/21/04	NA-4B-2450	N	N	N	N	N		N			N	N	N
10/21/04	NA-4B-5094	N	N	N	N	N		N			N	N	N
10/20/04	NA-1A-0005						N						
10/20/04	NA-1A-0508						N						
10/20/04	NA-1A-0812						N						
10/20/04	NA-1A-1216						N						
10/20/04	NA-1A-1620						N						
10/20/04	NA-1A-2024						N						
10/20/04	NA-1A-2428						N						
10/20/04	NA-1A-2832						N						
10/20/04	NA-1A-3238						N						
10/20/04	NA-1A-3844						N						
10/20/04	NA-1A-4854						N						
10/20/04	NA-1A-5864						N						
10/20/04	NA-1A-6874						N						
10/20/04	NA-1A-7884						N						
10/20/04	NA-1A-8894						N						
10/21/04	NA-2A-0005						N						
10/21/04	NA-2A-0508						N						
10/21/04	NA-2A-0812						N						
10/21/04	NA-2A-1216						N						
10/21/04	NA-2A-1620						N						
10/21/04	NA-2A-2024						N						
10/21/04	NA-2A-2428						N						
10/21/04	NA-2A-2832						N						
10/21/04	NA-2A-3238						N						
10/21/04	NA-2A-3844						N						

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs
10/21/04	NA-2A-4854						N						
10/21/04	NA-2A-5864						N						
10/21/04	NA-2A-6874						N						
10/21/04	NA-2A-7884						N						
10/21/04	NA-2A-8894						N						
10/22/04	NA-3A-0005						N						
10/22/04	NA-3A-0508						N						
10/22/04	NA-3A-0812						N						
10/22/04	NA-3A-1216						N						
10/22/04	NA-3A-1620						N						
10/22/04	NA-3A-2024						N						
10/22/04	NA-3A-2428						N						
10/22/04	NA-3A-2832						N						
10/22/04	NA-3A-3238						N						
10/22/04	NA-3A-3844						N						
10/22/04	NA-3A-4854						N						
10/22/04	NA-3A-5864						N						
10/22/04	NA-3A-6874						N						
10/22/04	NA-3A-7884						N						
10/22/04	NA-3A-8894						N						
10/21/04	NA-4A-0005						N						
10/21/04	NA-4A-0508						N						
10/21/04	NA-4A-0812						N						
10/21/04	NA-4A-1216						N						
10/21/04	NA-4A-1620						N						
10/21/04	NA-4A-2024						N						
10/21/04	NA-4A-2428						N						
10/21/04	NA-4A-2832						N						
10/21/04	NA-4A-3238						N						
10/21/04	NA-4A-3844						N						
10/21/04	NA-4A-4854						N						
10/21/04	NA-4A-5864						N						

Table 3-4. Round 2A Subsurface Sediment Samples Collected, Dates Sampled, and Analyses Conducted.

Date Sampled	Sample ID	Grain Size	Atterberg Limits[a] + Specific Gravity	SVOCs	Pesticides	PCB_{Ar}	Metals + Hg	TS + TOC	Hexavalent Chromium	TBT	$TPH_{diesel-oil}$	$TPH_{gasoline}$	VOCs
10/21/04	NA-4A-6874						N						
10/21/04	NA-4A-7884						N						
10/21/04	NA-4A-8894						N						

Notes:
[a]Atterberg Limits were analyzed on 22 subsurface samples following review of sediment textures at all stations. NA cores were not analyzed for Atterberg Limits.
[b]One archive collected - not enough sample volume.
[c]No grain size collected - asked CAS to use one archive jar for analysis.
[d]No archive collected - not enough sample volume.
[e]One extra grain size collected - coarse-grained sample.
[f]Used one archive for this analysis.
[g]NA core sample metals analysis did not include mercury.
Hg - mercury.
N - Sedimentation core sample analysis.
PCB_{Ar} - Polychlorinated biphenyls as Aroclors.
PCB_{Cong} - Polychlorinated biphenyls as congeners.
PCP - Pentachlorophenol.
R - Field Replicate, indicated by a "-2" in sample ID.
S - Homogenate Split, indicated by a "-3" in Sample ID.
SVOCs - Semivolatile organic compounds.
TBT - Tributyl tin.
TOC - Total organic carbon.
TPH - Total petroleum hydrocarbons.
TS - Total solids.
VOCs - Volatile organic compounds.
XX - sample selected for Atterberg limits analysis.
Blank shaded cells indicate a missing analysis.
Shaded cells with a bold "X" indicate an analysis added in the field.

Table 3-5. Data Validation Qualifiers and Definitions.

Data Qualifier	Definition
U	The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.
J	The associated numerical value is an estimated quantity.
R	The data are unusable (compound may or may not be present). Resampling and reanalysis are necessary for verification. (Overrides all quals and their codes.)
N	Presumptive evidence of presence of material.
NJ	Presumptive evidence of the presence of the material at an estimated quantity.
UJ	The material was analyzed for, but was not detected. The sample quantitation limit is an estimated quantity.
T	The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table 3-6. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points Detected	Number of Data Points Undetected	Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
Beach Sediment							
PCB Aroclors	28	25	227	252	10	detected	
					90	undetected	
					1	J	Compound confirmation
					6	UJ	Other
Conventionals	28	54	2	56	96	detected	
					4	undetected	
					4	U	LB
Chlorinated dioxin/furan homologs	27	255	15	270	94	detected	
					6	undetected	
					2	J	LRE
Chlorinated dioxins/furans	27	287	118	405	71	detected	
					29	undetected	
					1	J	Precision/reps., LRE
					9	U	Other
Grainsize	28	364	0	364	100	detected	
Metals	28	302	34	336	90	detected	
					10	undetected	
					14	J	LB, MS/MSD recovery, Precision/reps., Other, ICP serial dilution %D
					2	U	LB
					5	UJ	LB, MS/MSD recovery, Other
Polycyclic aromatic hydrocarbons	28	438	38	476	92	detected	
					8	undetected	
					4	U	LB
PCB congeners	13	149	7	156	96	detected	
					4	undetected	
					4	U	LB
Pesticides	28	186	595	781	24	detected	
					76	undetected	
					7	J	Compound confirmation, Calibration, MS/MSD recovery, Precision/reps., LCS, Surrogates, Other, LRE
					13	NJ	Compound confirmation, Calibration, MS/MSD recovery, Precision/reps., LCS, Surrogates, Other, LRE
					14	UJ	Calibration, MS/MSD recovery, LCS, Surrogates
Phenols	28	14	433	447	3	detected	
					97	undetected	
					1	J	Compound confirmation
					1	U	LB
Phthalates	28	31	137	168	18	detected	
					82	undetected	
					13	U	LB
Semivolatile organic compounds	28	54	926	980	6	detected	
					94	undetected	
					1	J	Compound confirmation, Calibration, LCS, Surrogates
					1	NJ	Compound confirmation, MS/MSD recovery, Precision/reps., LCS
					4	UJ	MS/MSD recovery, LCS, Surrogates
Surface Sediment							
PCB Aroclors	533	870	3927	4797	18	detected	
					82	undetected	
					8	J	HT, Compound confirmation, Calibration, MS/MSD recovery, Precision/reps., Surrogates, Other
					21	UJ	HT, Calibration, MS/MSD recovery recovery, Surrogates, Other

Table 3-6. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points Detected	Number of Data Points Undetected	Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
Butyltins	118	402	70	472	85	detected	
					15	undetected	
					6	J	Compound confirmation, MS/MSD recovery, Precision/reps.
Conventionals	576	2207	30	2237	99	detected	
					1	undetected	
					6	J	HT, MS/MSD recovery, Precision/reps.
					< 1	UJ	Precision/reps.
Chlorinated dioxin/furan homologs	79	706	84	790	95	detected	
					5	undetected	
					3	J	Precision/reps., Surrogates, LRE
					1	U	LB, Other
Chlorinated dioxins/furans	79	744	441	1185	69	detected	
					31	undetected	
					4	J	Precision/reps., Surrogates
					11	U	LB, Other
Grainsize	576	7488	0	7488	100	detected	
					< 1	J	Precision/reps.
Chlorinated herbicides	69	11	678	689	2	detected	
					98	undetected	
					1	J	Surrogates
					1	UJ	MS/MSD recovery, Precision/reps., Surrogates
Metals	576	6467	464	6931	94	detected	
					6	undetected	
					20	J	LB, MS/MSD recovery, Precision/reps., LCS, Other, ICP serial dilution %D
					2	U	FB, LB
					3	UJ	FB, LB, MS/MSD recovery, Precision/reps., Other, ICP serial dilution %D
Polycyclic aromatic hydrocarbons	576	9385	557	9942	96	detected	
					4	undetected	
					1	J	Calibration, MS/MSD recovery, Precision/reps., Surrogates, LRE
					2	U	LB, TB
					< 1	UJ	LB, Surrogates
Chlorinated pesticides	521	5161	9045	14206	37	detected	
					63	undetected	
					19	J	HT, Compound confirmation, Calibration, MS/MSD recovery, Precision/reps., LCS, Surrogates, Other, LRE
					14	NJ	HT, Compound confirmation, Calibration, MS/MSD recovery, Precision/reps., LCS, Surrogates, Other, LRE
					< 1	U	LB
					20	UJ	Compound confirmation, Calibration, LB, MS/MSD recovery, LCS, Surrogates, Other
Petroleum	225	457	217	674	68	detected	
					32	undetected	
					66	J	Chromatographic pattern, Precision/reps., LCS, Surrogates
					10	U	FB, LB
					4	UJ	Calibration, LB, Surrogates
Phenols	576	685	8621	9306	8	detected	
					92	undetected	
					2	J	HT, Compound confirmation, Precision/reps.
					< 1	U	LB
					13	UJ	HT, Calibration, LB, MS/MSD recovery, Surrogates
Phthalates	576	739	2714	3453	21	detected	
					79	undetected	
					5	J	HT, Precision/reps.
					6	U	HT, LB
					17	UJ	HT, LB

Table 3-6. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points Detected	Number of Data Points Undetected	Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
Semivolatile organic compounds	576	1625	18475	20100	8	detected	
					92	undetected	
					2	J	HT, Compound confirmation, Calibration, MS/MSD recovery, Precision/reps., LCS, Surrogates
					1	NJ	Compound confirmation, Calibration, MS/MSD recovery, Precision/reps., LCS, Surrogates
					< 1	U	LB
					22	UJ	HT, Compound confirmation, Calibration, LB, MS/MSD recovery, Precision/reps., LCS, Surrogates
Volatile organic compounds	150	268	6707	6975	4	detected	
					96	undetected	
					1	J	Calibration, LCS, Surrogates
					5	U	FB, LB, TB
					6	UJ	Calibration, LB, MS/MSD recovery, Precision/reps., Surrogates
Subsurface Sediments							
PCB Aroclors	481	800	3529	4329	19	detected	
					81	undetected	
					13	J	Compound confirmation, Calibration, MS/MSD recovery, Precision/reps., Surrogates, Other, LRE
					< 1	NJ	Compound confirmation
					11	UJ	Calibration, MS/MSD recovery, Surrogates, Other
Butyltins	178	400	309	709	56	detected	
					44	undetected	
					4	J	HT, Compound confirmation, Precision/reps., Surrogates
					1	UJ	HT, MS/MSD recovery
Conventionals	639	1706	9	1715	99	detected	
					1	undetected	
					< 1	U	LB
Chlorinated dioxin/furan homologs	123	1018	212	1230	83	detected	
					17	undetected	
					1	J	Precision/reps., Surrogates, LRE
					5	U	FB, LB, Other
Chlorinated dioxin/furans	123	1029	816	1845	56	detected	
					44	undetected	
					1	J	Precision/reps., Surrogates
					12	U	FB, LB, Other
Grainsize	547	7111	0	7111	100	detected	
					< 1	J	Precision/reps.
Chlorinated herbicides	147	12	1489	1501	10	detected	
					90	undetected	
					< 1	J	Surrogates, IS Performance
					< 1	UJ	MS/MSD recovery
Metals	534	5784	631	6415	91	detected	
					9	undetected	
					13	J	LB, MS/MSD recovery, Precision/reps., Other, ICP serial dilution %D, IS Performance
					3	U	FB, LB
					4	UJ	LB, MS/MSD recovery, Precision/reps., Other
Polycyclic aromatic hydrocarbons	577	8434	872	9306	91	detected	
					9	undetected	
					5	J	HT, Calibration, MS/MSD recovery, Precision/reps., LCS, Surrogates, IS Performance, LRE
					2	U	HT, FB, LB
					< 1	UJ	HT, Calibration, LB, IS Performance

Table 3-6. Summary of Qualified Data by Parameter Group.

Analyte Group	Number of Samples	Number of Data Points: Detected	Number of Data Points: Undetected	Total # of Data Points	Detection and Qualification Frequencies (percent)		Reason for Qualification
Chlorinated pesticides	464	3374	9253	12627	27	detected	
					73	undetected	
					11	J	HT, Compound confirmation, Calibration, MS/MSD recovery, Precision/reps., LCS, Surrogates, Other, LRE
					14	NJ	HT, Compound confirmation, Calibration, MS/MSD recovery, Precision/reps., LCS, Surrogates, Other, LRE
					< 1	U	LB
					29	UJ	HT, Calibration, MS/MSD recovery, Precision/reps., LCS, Surrogates
Petroleum hydrocarbons	442	757	401	1158	66	detected	
					34	undetected	
					63	J	HT, Chromatographic pattern, LB, Precision/reps., Surrogates
					18	U	Chromatographic pattern, LB
					1	UJ	HT, LB, Precision/reps., Surrogates
Phenols	531	818	7812	8630	10	detected	
					90	undetected	
					2	J	HT, Compound confirmation, MS/MSD recovery, Precision/reps., LCS, Surrogates, IS Performance
					2	U	LB
					3	UJ	HT, Calibration, LB, MS/MSD recovery, Precision/reps., LCS, Surrogates
Phthalates	531	408	2778	3186	13	detected	
					87	undetected	
					< 1	J	Calibration, Precision/reps., Surrogates
					9	U	HT, LB
					1	UJ	HT, Calibration, LB, MS/MSD recovery, LCS, Surrogates
Semivolatile organic compounds	577	1422	17154	18576	8	detected	
					92	undetected	
					1	J	HT, Compound confirmation, Calibration, MS/MSD recovery, Precision/reps., LCS, Surrogates, LRE
					1	NJ	HT, Compound confirmation, Calibration, MS/MSD recovery, Precision/reps., LCS, Surrogates
					< 1	U	LB
					5	UJ	HT, Calibration, LB, MS/MSD recovery, Precision/reps., LCS, Surrogates, IS Performance
Volatile organic compounds	279	1033	12018	13051	8	detected	
					92	undetected	
					1	J	HT, Calibration, MS/MSD recovery, LCS, LRE
					6	U	FB, LB, TB
					2	UJ	HT, Calibration, LB, MS/MSD recovery, LCS, IS Performance

Notes:

Includes replicates and splits, excludes field blanks.

The analyte groupings for SVOCs, phenols, PAHs, and phthalates are as defined in the Round 2 QAPP, Table A6-2 (see Integral and Windward 2004).

%D	percent difference
FB	field blank
HT	holding time
ICP	inductively coupled plasma
IS	internal standard
LB	laboratory blank
LCS	laboratory control sample
LRE	linear range exceeded
MS/MSD	matrix spike/matrix spike duplicate
PCB	polychlorinated biphenyls

Table 4-1. Summary Statistics of Chemical Concentrations in Beach Sediment Samples.

Analyte	Number of Samples	Number Detected	% Detected	Detected Concentrations					Detected and Nondetected Concentrations				
				Minimum	Maximum	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th
Conventionals													
Total solids (percent)	27	27	100	69.1	95.3	82.7	83.6	92.2	69.1	95.3	82.7	83.6	92.2
Total organic carbon (percent)	27	26	96.3	0.04 J	1.97	0.482	0.27	1.39	0.04 J	1.97	0.467	0.27	1.39
Medium gravel (percent)	27	27	100	0	39.1	7.1	3.36	18.4	0	39.1	7.1	3.36	18.4
Fine gravel (percent)	27	27	100	0.103 T	8.51	2.83	2.09	7.23	0.103 T	8.51	2.83	2.09	7.23
Very coarse sand (percent)	27	27	100	0.203 T	6	2.59	2.38	5.68	0.203 T	6	2.59	2.38	5.68
Coarse sand (percent)	27	27	100	0.407 T	31.6	13.3	13.6	25	0.407 T	31.6	13.3	13.6	25
Medium sand (percent)	27	27	100	9.56 T	68.3	41.8	45.7	65.6	9.56 T	68.3	41.8	45.7	65.6
Fine sand (percent)	27	27	100	4.55	52.2 T	15	12.6	25	4.55	52.2 T	15	12.6	25
Very fine sand (percent)	27	27	100	0.14	13.5	4.51	1.55	12.9 T	0.14	13.5	4.51	1.55	12.9 T
Fines (percent)	27	27	100	0.32 T	49.5 T	12.1	8.1 T	35.9 T	0.32 T	49.5 T	12.1	8.1 T	35.9 T
Coarse silt (percent)	27	27	100	0.05	13.1 T	3.56	1.74	11.1	0.05	13.1 T	3.56	1.74	11.1
Medium silt (percent)	27	27	100	0	19	3.08	1.74	9.45	0	19	3.08	1.74	9.45
Fine silt (percent)	27	27	100	0	7.3 T	1.78	1.21	3.75	0	7.3 T	1.78	1.21	3.75
Very fine silt (percent)	27	27	100	0	4.53 T	1.14	0.7	3.34	0	4.53 T	1.14	0.7	3.34
8-9 Phi clay (percent)	27	27	100	0	2.38	0.815	0.61	2.03 T	0	2.38	0.815	0.61	2.03 T
>9 Phi clay (percent)	26	26	100	0	7.05 T	1.8	0.74	5.74	0	7.05 T	1.8	0.74	5.74
Metals (mg/kg)													
Aluminum (mg/kg)	27	27	100	5640	18800	11300	10600	16400	5640	18800	11300	10600	16400
Antimony (mg/kg)	27	15	55.6	0.07 J	2.41 J	0.441	0.33 J	0.64 J	0.07 J	2.41 J	0.298	0.15 J	0.6 J
Arsenic (mg/kg)	27	27	100	1.67	8	3.09	2.72	4.58	1.67	8	3.09	2.72	4.58
Cadmium (mg/kg)	27	27	100	0.076	4.21	0.385	0.14 T	0.721	0.076	4.21	0.385	0.14 T	0.721
Chromium (mg/kg)	27	27	100	11	83.6	23.2	18.6	46.1	11	83.6	23.2	18.6	46.1
Copper (mg/kg)	27	27	100	8.8 J	108	26	18.9 J	55.7 J	8.8 J	108	26	18.9 J	55.7 J
Lead (mg/kg)	27	27	100	4.79	242	29.8	15.9 T	48.2	4.79	242	29.8	15.9 T	48.2
Mercury (mg/kg)	27	26	96.3	0.008 J	0.412	0.0515	0.024 J	0.101	0.007 UJ	0.412	0.0498	0.024 J	0.101
Nickel (mg/kg)	27	27	100	13.9	38.2	19.8	19.4	24.1	13.9	38.2	19.8	19.4	24.1
Selenium (mg/kg)	27	7	25.9	0.05 J	0.08 J	0.0643	0.06 J	0.08 J	0.04 U	0.21 U	0.0596	0.05 UT	0.08 J
Silver (mg/kg)	27	27	100	0.019 J	0.534	0.0954	0.046	0.222	0.019 J	0.534	0.0954	0.046	0.222
Zinc (mg/kg)	27	27	100	52.7	1230	156	78.1	274	52.7	1230	156	78.1	274
PCB Aroclors (ug/kg)													
Aroclor 1016 (ug/kg)	27	0	0						1.1 U	85 U	6.72	1.3 U	15 U
Aroclor 1242 (ug/kg)	27	0	0						1.1 U	87 U	6.85	1.3 U	15 U
Aroclor 1248 (ug/kg)	27	7	25.9	8.7	1400	243	37	140	1.4 U	1400	65.6	2.3 UJ	82
Aroclor 1254 (ug/kg)	27	3	11.1	54 J	78 T	67.3	70	70	0.64 U	170 UJ	16.5	1.5 U	70
Aroclor 1260 (ug/kg)	27	13	48.1	4.4	240	57.6	32	110	0.82 U	240	35.5	11	110
Aroclor 1262 (ug/kg)	27	0	0						0.98 U	170 UJ	10.2	2.1 U	21 U
Aroclor 1268 (ug/kg)	27	0	0						0.84 U	68 U	5.43	1.8 U	12 U
Aroclor 1221 (ug/kg)	27	0	0						1.9 U	160 U	12.5	2.4 U	28 U
Aroclor 1232 (ug/kg)	27	0	0						1.8 U	140 U	11.1	2.2 U	25 U
Polychlorinated biphenyls (ug/kg)	27	16	59.3	4.4 T	1400 T	166	73 T	322 T	1.9 UT	1400 T	99.1	27 T	140 T
PCB Congeners (ug/kg)													
3,3',4,4'-Tetrachlorobiphenyl (pg/g)	13	13	100	1.85	8080	763	139	866	1.85	8080	763	139	866
3,4,4',5-Tetrachlorobiphenyl (pg/g)	13	13	100	0.352	1130	110	28.8	105	0.352	1130	110	28.8	105
2,3,3',4,4'-Pentachlorobiphenyl (pg/g)	13	13	100	7.84	31900	3110	693	2730	7.84	31900	3110	693	2730
PCB106 & 118 (pg/g)	13	13	100	16.9	56000	5750	1180	4840	16.9	56000	5750	1180	4840
2,3,4,4',5-Pentachlorobiphenyl (pg/g)	13	13	100	0.444	1970	187	40.3	167	0.444	1970	187	40.3	167
2,3',4,4',5'-Pentachlorobiphenyl (pg/g)	13	13	100	0.381	1500	148	32.9	150	0.381	1500	148	32.9	150
3,3',4,4',5-Pentachlorobiphenyl (pg/g)	13	12	92.3	0.237	272	33.7	7.33	33.9	0.237	272	31.2	7.33	33.9
2,3,3',4,4',5-Hexachlorobiphenyl (pg/g)	13	13	100	2.21	3370	477	131	867	2.21	3370	477	131	867
2,3,3',4,4',5'-Hexachlorobiphenyl (pg/g)	13	13	100	0.708	751	101	20.5	128	0.708	751	101	20.5	128

Table 4-1. Summary Statistics of Chemical Concentrations in Beach Sediment Samples.

Analyte	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Maximum	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th
2,3',4,4',5,5'-Hexachlorobiphenyl (pg/g)	13	13	100	1.15	1150	192	59.1	460	1.15	1150	192	59.1	460
3,3',4,4',5,5'-Hexachlorobiphenyl (pg/g)	13	7	53.8	0.151	4.34	1.26	0.395	2.21	0.151	4.34	0.961	0.594 U	2.21
2,3,3',4,4',5,5'-Heptachlorobiphenyl (pg/g)	13	13	100	0.371	283	63.7	23.1	241	0.371	283	63.7	23.1	241
Organochlorine Pesticides (ug/kg)													
2,4'-DDD (ug/kg)	27	18	66.7	0.057 NJ	28.2 J	3.43	0.371 NJ	20 J	0.0272 U	28.2 J	2.32	0.27 NJ	3.35 J
2,4'-DDE (ug/kg)	27	3	11.1	1.06 NJ	13 J	6.56	5.61 J	5.61 J	0.0288 U	13 J	0.758	0.0328 U	1.06 NJ
2,4'-DDT (ug/kg)	27	16	59.3	0.085 J	123 J	10.2	0.46 NJ	23.9 J	0.0381 U	123 J	6.04	0.235 NJ	7.1 J
4,4'-DDD (ug/kg)	27	23	85.2	0.082 NJ	81.5 NJ	5.97	0.947 NJ	4.71 NJ	0.041 U	81.5 NJ	5.1	0.749 NJ	4.71 NJ
4,4'-DDE (ug/kg)	27	20	74.1	0.088 NJ	122 NJ	8.5	0.407	33.2 NJ	0.0384 U	122 NJ	6.31	0.269 NJ	5.03
4,4'-DDT (ug/kg)	27	26	96.3	0.219 J	184 J	11.5	0.559 J	13 NJ	0.0478 U	184 J	11	0.559 J	13 NJ
Total of 4,4'-DDD, -DDE, -DDT (ug/kg)	27	27	100	0.311 JT	334 JT	22.4	2 JT	17.9 JT	0.311 JT	334 JT	22.4	2 JT	17.9 JT
Aldrin (ug/kg)	27	5	18.5	0.28 NJ	2.48 J	1.21	0.932 J	1.48 NJ	0.0264 UJ	2.48 J	0.248	0.0311 UJ	0.932 J
alpha-Hexachlorocyclohexane (ug/kg)	27	7	25.9	0.084 J	0.48 NJ	0.231	0.181 NJ	0.33 NJ	0.0282 U	0.48 NJ	0.088	0.0338 U	0.262 NJ
beta-Hexachlorocyclohexane (ug/kg)	27	14	51.9	0.052 J	5.13 NJ	2.05	1.29 NJ	4.56 NJ	0.0285 U	5.13 NJ	1.08	0.148 U	3.49 NJ
delta-Hexachlorocyclohexane (ug/kg)	27	0	0						0.0603 U	0.314 UJ	0.0776	0.0674 UJ	0.0769 UJ
gamma-Hexachlorocyclohexane (ug/kg)	27	3	11.1	0.218 J	1.51 NJ	0.919	1.03 NJ	1.03 NJ	0.0644 U	1.51 NJ	0.177	0.0733 U	0.335 U
cis-Chlordane (ug/kg)	27	6	22.2	0.085 NJ	1.85	0.569	0.336 J	0.567	0.0281 U	1.85	0.155	0.0323 U	0.381 J
trans-Chlordane (ug/kg)	27	9	33.3	0.036 J	3.09	0.545	0.215 NJ	0.654 NJ	0.0177 U	3.09	0.197	0.021 U	0.317 NJ
Oxychlordane (ug/kg)	27	0	0						0.0152 U	0.0791 U	0.0196	0.017 UJ	0.0194 U
cis-Nonachlor (ug/kg)	27	6	22.2	0.158 NJ	0.649 NJ	0.489	0.448 J	0.618 NJ	0.0351 U	0.649 NJ	0.139	0.0393 UJ	0.615 J
trans-Nonachlor (ug/kg)	27	4	14.8	0.085 J	3.3 NJ	1.4	0.943 J	1.26 NJ	0.0306 U	3.3 NJ	0.248	0.0352 U	0.943 J
Total Chlordanes (ug/kg)	27	12	44.4	0.036 JT	6.33 JT	1.4	0.215 JT	3.92 JT	0.0351 UT	6.33 JT	0.646	0.0425 UT	1.67 JT
Dieldrin (ug/kg)	27	3	11.1	0.056 J	0.715 J	0.327	0.21 NJ	0.21 NJ	0.0432 U	0.715 J	0.0863	0.0492 U	0.21 NJ
alpha-Endosulfan (ug/kg)	27	3	11.1	0.03 J	0.097 NJ	0.0547	0.037 J	0.037 J	0.0243 U	0.126 U	0.0345	0.0286 U	0.037 J
beta-Endosulfan (ug/kg)	27	3	11.1	0.109	0.726 NJ	0.353	0.225 NJ	0.225 NJ	0.0203 U	0.726 NJ	0.0663	0.0243 U	0.109
Endosulfan sulfate (ug/kg)	27	0	0						0.0623 U	0.324 UJ	0.0802	0.0697 UJ	0.0795 UJ
Endrin (ug/kg)	24	5	20.8	0.133 NJ	1.92 J	0.757	0.751 NJ	0.82 NJ	0.0335 U	1.92 J	0.188	0.0394 U	0.751 NJ
Endrin aldehyde (ug/kg)	27	0	0						0.0368 U	0.192 U	0.0474	0.0412 UJ	0.047 U
Endrin ketone (ug/kg)	27	5	18.5	0.034 NJ	0.778 J	0.434	0.456 NJ	0.513	0.0248 U	0.778 J	0.127	0.0285 U	0.513
Heptachlor (ug/kg)	27	0	0						0.0256 U	0.133 UJ	0.033	0.0287 UJ	0.0327 U
Heptachlor epoxide (ug/kg)	27	0	0						0.0335 U	0.174 U	0.0431	0.0374 UJ	0.0427 U
Methoxychlor (ug/kg)	27	1	3.7	0.95 NJ	0.95 NJ	0.95	0.95 NJ	0.95 NJ	0.0334 U	0.95 NJ	0.0767	0.0373 UJ	0.0482 U
Mirex (ug/kg)	27	0	0						0.0303 U	0.158 U	0.039	0.0339 UJ	0.0387 U
Toxaphene (ug/kg)	27	0	0						7.93 U	41.3 U	10.2	8.87 UJ	10.1 U
Semivolatile Organic Compounds (ug/kg)													
1,2,4-Trichlorobenzene (ug/kg)	27	0	0						1.6 U	18 U	3.29	1.9 U	8.6 U
1,2-Dichlorobenzene (ug/kg)	27	0	0						1.4 U	16 U	2.87	1.6 UT	7.4 U
1,3-Dichlorobenzene (ug/kg)	27	0	0						1.8 U	19 U	3.5	2 U	9.1 U
1,4-Dichlorobenzene (ug/kg)	27	1	3.7	5 J	5 J	5	5 J	5 J	2.1 U	23 U	4.25	2.4 U	11 U
Azobenzene (ug/kg)	27	0	0						2.6 U	28 U	5.25	3 U	14 U
2,4-Dinitrotoluene (ug/kg)	27	0	0						3 U	33 U	6.11	3.5 U	16 U
2,6-Dinitrotoluene (ug/kg)	27	0	0						3 U	33 U	6.11	3.5 U	16 U
2-Chloronaphthalene (ug/kg)	27	0	0						3.9 U	42 U	7.79	4.5 U	21 U
2-Nitroaniline (ug/kg)	27	0	0						2.9 U	32 U	5.89	3.4 U	16 U
3,3'-Dichlorobenzidine (ug/kg)	27	0	0						4 U	44 U	8.06	4.6 U	21 U
3-Nitroaniline (ug/kg)	27	0	0						2.8 U	31 U	5.68	3.2 U	15 U
4-Bromophenyl phenyl ether (ug/kg)	27	0	0						1.5 U	17 U	3.11	1.8 U	8 U
4-Chloroaniline (ug/kg)	27	0	0						2.3 U	25 U	4.6	2.6 U	12 U
4-Chlorophenyl phenyl ether (ug/kg)	27	0	0						2.2 U	24 U	4.42	2.5 U	12 U
4-Nitroaniline (ug/kg)	27	0	0						3.7 U	40 U	7.4	4.2 U	20 U
Aniline (ug/kg)	27	1	3.7	83	83	83	83	83	1.6 U	83	6.29	1.9 U	11 U

Table 4-1. Summary Statistics of Chemical Concentrations in Beach Sediment Samples.

Analyte	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Maximum	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th
Benzoic acid (ug/kg)	27	0	0						110 U	1200 U	213	120 U	550 U
Benzyl alcohol (ug/kg)	27	0	0						4 U	44 U	8.06	4.6 U	21 U
Bis(2-chloroethoxy) methane (ug/kg)	27	0	0						1.4 U	16 U	2.87	1.6 UT	7.4 U
Bis(2-chloroethyl) ether (ug/kg)	27	0	0						2.6 U	28 U	5.25	3 U	14 U
Carbazole (ug/kg)	27	9	33.3	1.8 J	390	71.4	5.9 J	130	1.5 U	390	25.3	1.7 U	86
Dibenzofuran (ug/kg)	27	21	77.8	0.28 J	76 J	6.44	0.82 J	14	0.19 U	76 J	5.05	0.64 J	14
Hexachlorobenzene (ug/kg)	27	6	22.2	0.099 T	2.09 JT	0.894	0.176 JT	2.03 JT	0.0151 UT	16 UT	1.89	2.03 JT	2.9 UT
Hexachlorobutadiene (ug/kg)	27	1	3.7	0.619 JT	0.619 JT	0.619	0.619 JT	0.619 JT	0.0291 UJT	0.619 JT	0.0593	0.0332 UT	0.0421 UT
Hexachlorocyclopentadiene (ug/kg)	27	0	0						16 U	180 U	32.9	19 U	86 U
Hexachloroethane (ug/kg)	27	1	3.7	0.538 JT	0.538 JT	0.538	0.538 JT	0.538 JT	0.0431 UJT	3.2 UT	0.19	0.049 UJT	0.224 UT
Isophorone (ug/kg)	27	0	0						1.8 U	19 U	3.5	2 U	9.1 U
Nitrobenzene (ug/kg)	27	0	0						2.2 U	24 U	4.42	2.5 U	12 U
N-Nitrosodimethylamine (ug/kg)	27	0	0						6.5 U	72 U	13.2	7.5 U	35 U
N-Nitrosodipropylamine (ug/kg)	27	0	0						3.5 U	38 U	6.98	4 U	19 U
N-Nitrosodiphenylamine (ug/kg)	27	0	0						2.4 U	26 U	4.82	2.8 U	13 U
Bis(2-chloroisopropyl) ether (ug/kg)	27	0	0						1.3 U	14 U	2.61	1.5 U	6.9 U
Phenols (ug/kg)													
2,3,4,6;2,3,5,6-Tetrachlorophenol coelution (ug/kg)	27	2	7.41	1.5 J	120 J	60.8	1.5 J	1.5 J	0.39 U	120 J	5.28	0.45 U	2.6 U
2,4,5-Trichlorophenol (ug/kg)	27	0	0						0.31 U	6.3 U	1.13	0.36 U	2.1 U
2,4,6-Trichlorophenol (ug/kg)	27	0	0						0.29 U	2.6 U	0.825	0.43 U	2.4 U
2,4-Dichlorophenol (ug/kg)	27	0	0						2 U	21 U	3.94	2.3 U	11 U
2,4-Dimethylphenol (ug/kg)	26	0	0						5.9 U	65 U	12.2	6.8 U	32 U
2,4-Dinitrophenol (ug/kg)	27	0	0						39 U	420 U	77.9	45 U	210 U
2-Chlorophenol (ug/kg)	27	0	0						1.9 U	20 U	3.72	2.1 U	9.7 U
2-Methylphenol (ug/kg)	27	0	0						3.7 U	40 U	7.4	4.2 U	20 U
2-Nitrophenol (ug/kg)	27	0	0						2.8 U	31 U	5.68	3.2 U	15 U
4,6-Dinitro-2-methylphenol (ug/kg)	27	0	0						1.9 U	20 U	3.72	2.1 U	9.7 U
4-Chloro-3-methylphenol (ug/kg)	27	0	0						2.3 U	25 U	4.6	2.6 U	12 U
4-Methylphenol (ug/kg)	27	2	7.41	4.6 J	9.5 J	7.05	4.6 J	4.6 J	3.1 U	34 U	6.52	3.6 U	17 U
4-Nitrophenol (ug/kg)	27	0	0						32 U	350 U	65.4	37 U	180 U
Pentachlorophenol (ug/kg)	27	6	22.2	0.78 J	9.1 J	4.17	1.25 JT	8.2 J	0.42 U	9.1 J	1.63	0.53 U	4.5 J
Phenol (ug/kg)	27	2	7.41	4.1 J	6.1 J	5.1	4.1 J	4.1 J	2.1 U	23 U	4.87	2.6 U	11 U
2,3,4,5-Tetrachlorophenol (ug/kg)	27	1	3.7	0.82 J	0.82 J	0.82	0.82 J	0.82 J	0.5 U	4.2 U	1.34	0.71 U	3.9 U
Phthalates (ug/kg)													
Dimethyl phthalate (ug/kg)	27	0	0						2 U	21 U	3.94	2.3 U	11 U
Diethyl phthalate (ug/kg)	27	0	0						3.8 U	41 U	7.61	4.3 U	20 U
Dibutyl phthalate (ug/kg)	27	19	70.4	3.5 J	690	41.6	4.5 J	14	2.9 U	690	32.2	4.4 J	19 U
Butylbenzyl phthalate (ug/kg)	27	4	14.8	3.95 JT	130	36.2	5.4 J	5.5 J	1.6 U	130	8.04	1.9 U	8.6 U
Di-n-octyl phthalate (ug/kg)	27	1	3.7	180	180	180	180	180	1.3 U	180	8.96	1.5 U	6.9 U
Bis(2-ethylhexyl) phthalate (ug/kg)	27	5	18.5	39	2600	652	190	260	2 U	2600	130	12 U	190
Polycyclic Aromatic Hydrocarbons (ug/kg)													
2-Methylnaphthalene (ug/kg)	27	25	92.6	0.51 J	210	11.7	1.5 J	13	0.39 U	210	10.9	1.4 J	13
Acenaphthene (ug/kg)	27	21	77.8	0.21 J	600	40.9	2.1 J	65	0.18 U	600	31.8	1.6 J	65
Acenaphthylene (ug/kg)	27	26	96.3	0.57 J	1100	50.9	1.9	40	0.27 U	1100	49	1.9	40
Anthracene (ug/kg)	27	26	96.3	0.56 J	1300	68.5	3	72	0.24 U	1300	66	3	72
Fluorene (ug/kg)	27	22	81.5	0.28 J	340	21.6	1.5 J	28	0.21 U	340	17.7	1.1 J	28
Naphthalene (ug/kg)	27	11	40.7	5.6	590	68.4	11	38	0.73 U	590	29	2.4 U	29
Phenanthrene (ug/kg)	27	27	100	0.53 J	4500	236	10	390	0.53 J	4500	236	10	390
Low Molecular Weight PAH (ug/kg)	27	27	100	1.62 JT	8640 T	439	19.6 JT	603 T	1.62 JT	8640 T	439	19.6 JT	603 T
Dibenz(a,h)anthracene (ug/kg)	27	25	92.6	0.6 J	980	59.7	4.8	150	0.29 U	980	55.3	4.5	150
Benz(a)anthracene (ug/kg)	27	27	100	0.56 J	6200	320	13	570	0.56 J	6200	320	13	570

Table 4-1. Summary Statistics of Chemical Concentrations in Beach Sediment Samples.

Analyte	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Maximum	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th
Benzo(a)pyrene (ug/kg)	27	26	96.3	1.3 J	10000	528	16	900	0.24 U	10000	508	16	900
Benzo(b)fluoranthene (ug/kg)	27	27	100	0.87 J	10000	517	22	960	0.87 J	10000	517	22	960
Benzo(g,h,i)perylene (ug/kg)	27	27	100	0.5 J	9600	470	23	680	0.5 J	9600	470	23	680
Benzo(k)fluoranthene (ug/kg)	27	26	96.3	0.96 J	3100	170	7.7	330	0.36 U	3100	163	7.7	330
Chrysene (ug/kg)	27	26	96.3	1.4 J	8100	423	13	660	0.45 U	8100	407	13	660
Fluoranthene (ug/kg)	27	27	100	0.8 J	12000	605	28	760	0.8 J	12000	605	28	760
Indeno(1,2,3-cd)pyrene (ug/kg)	27	26	96.3	1.2 J	8600	446	12	750	0.26 U	8600	429	12	750
Pyrene (ug/kg)	27	27	100	0.57 J	17000	810	28	910	0.57 J	17000	810	28	910
High Molecular Weight PAH (ug/kg)	27	27	100	3.3 JT	85600 T	4290	150 JT	6670 T	3.3 JT	85600 T	4290	150 JT	6670 T
Polycyclic Aromatic Hydrocarbons (ug/kg)	27	27	100	4.92 JT	94200 T	4720	183 JT	7270 T	4.92 JT	94200 T	4720	183 JT	7270 T
Dioxins/Furans (pg/g)													
Tetrachlorodibenzo-p-dioxin homologs (pg/g)	26	19	73.1	0.021	5.224	0.735	0.192	2.254	0.017 U	5.224	0.543	0.105	1.6625 T
Pentachlorodibenzo-p-dioxin homologs (pg/g)	26	21	80.8	0.097	18.595	2.04	0.465	3.704	0.015 U	18.595	1.65	0.388	3.704
Hexachlorodibenzo-p-dioxin homologs (pg/g)	26	26	100	0.423	109.14	13.9	6.183	37.147	0.423	109.14	13.9	6.183	37.147
Heptachlorodibenzo-p-dioxin homologs (pg/g)	26	26	100	4.099	825.833	113	36.67	318.567	4.099	825.833	113	36.67	318.567
Octachlorodibenzo-p-dioxin (pg/g)	26	26	100	11.545	2758.606 J	412	134.149	1420.139 JT	11.545	2758.606 J	412	134.149	1420.139 JT
Tetrachlorodibenzofuran homologs (pg/g)	26	23	88.5	0.134	341.187	18.4	2.181	9.945	0.011 U	341.187	16.3	1.023	9.945
Pentachlorodibenzofuran homologs (pg/g)	26	26	100	0.087	370.957	25.8	4.283	37.891	0.087	370.957	25.8	4.283	37.891
Hexachlorodibenzofuran homologs (pg/g)	26	26	100	0.384	287.92	33.8	8.424	86.82	0.384	287.92	33.8	8.424	86.82
Heptachlorodibenzofuran homologs (pg/g)	26	26	100	0.654	281.947	43.2	11.008	101.019	0.654	281.947	43.2	11.008	101.019
Octachlorodibenzofuran (pg/g)	26	26	100	0.798 J	285.206	34.7	7.825	126.442	0.798 J	285.206	34.7	7.825	126.442
2,3,7,8-Tetrachlorodibenzo-p-dioxin (pg/g)	26	5	19.2	0.04 J	1.291	0.392	0.099 J	0.484	0.011 U	1.291	0.103	0.026 U	0.118 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (pg/g)	26	18	69.2	0.037 JT	0.769 J	0.227	0.124 J	0.666 J	0.015 U	0.769 J	0.169	0.08 J	0.531 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (pg/g)	26	13	50	0.026 J	3.14	0.54	0.183 J	1.023	0.026 J	3.14	0.319	0.134 U	0.98
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (pg/g)	26	26	100	0.074 J	8.572	1.89	0.849	6.86	0.074 J	8.572	1.89	0.849	6.86
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (pg/g)	26	21	80.8	0.101 JT	13.44	1.53	0.547 J	2.857	0.034 U	13.44	1.25	0.474 J	2.857
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (pg/g)	26	26	100	1.857	326.429 J	50.6	17.705	154.258	1.857	326.429 J	50.6	17.705	154.258
2,3,7,8-Tetrachlorodibenzofuran (pg/g)	26	18	69.2	0.079 J	153.626	9.43	0.399	5.366	0.011 U	153.626	6.55	0.1825 T	2.8
1,2,3,7,8-Pentachlorodibenzofuran (pg/g)	26	16	61.5	0.079 JT	146.45	10.6	0.3235 JT	14.839	0.014 U	146.45	6.55	0.099 J	2.7475 T
2,3,4,7,8-Pentachlorodibenzofuran (pg/g)	26	20	76.9	0.037 J	54.222	4.13	0.411 J	11.745	0.014 U	54.222	3.19	0.157 J	6.12
1,2,3,4,7,8-Hexachlorodibenzofuran (pg/g)	26	23	88.5	0.074 J	174.865	11.5	0.706 J	14.086	0.022 U	174.865	10.2	0.638 J	14.086
1,2,3,6,7,8-Hexachlorodibenzofuran (pg/g)	26	23	88.5	0.028 J	48.45	3.04	0.404 J	3.774	0.023 U	48.45	2.69	0.302 J	3.774
1,2,3,7,8,9-Hexachlorodibenzofuran (pg/g)	26	4	15.4	0.196 J	2.549	0.947	0.467 JT	0.576 J	0.017 U	2.549	0.177	0.032 U	0.467 JT
2,3,4,6,7,8-Hexachlorodibenzofuran (pg/g)	26	22	84.6	0.043 J	10.781	1.52	0.497 J	2.507	0.022 U	10.781	1.29	0.409 J	2.507
1,2,3,4,6,7,8-Heptachlorodibenzofuran (pg/g)	26	23	88.5	0.396 J	62.588	13	5.23 JT	53.38	0.197 U	62.588	11.5	3.941	53.38
1,2,3,4,7,8,9-Heptachlorodibenzofuran (pg/g)	26	17	65.4	0.104 J	21.959	2.36	0.406 J	7.34	0.049 U	21.959	1.57	0.311 J	3.136
2,3,7,8-TCDD TEQ (pg/g)	26	26	100	0.0272 JT	76.8 JT	7.5	1.08 JT	15.5 JT	0.0272 JT	76.8 JT	7.5	1.08 JT	15.5 JT

Notes:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte).
Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Table 4-2. Summary Statistics of Chemical Concentrations in Surface Interval Sediment Samples.

Analyte	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Detected Concentrations Maximum	Detected Concentrations Mean	Detected Concentrations Median	Detected Concentrations 95th	Detected and Nondetected Concentrations Minimum	Detected and Nondetected Concentrations Maximum	Detected and Nondetected Concentrations Mean	Detected and Nondetected Concentrations Median	Detected and Nondetected Concentrations 95th
Conventionals (percent)													
Total solids (percent)	571	571	100	25.9	83.8	54.1	51.8 T	73.9	25.9	83.8	54.1	51.8 T	73.9
Total organic carbon (percent)	562	562	100	0.08	27	1.98	1.94	3.39	0.08	27	1.98	1.94	3.39
Medium gravel (percent)	573	573	100	0	60	1.25		5.99	0	60	1.25	0	5.99
Fine gravel (percent)	573	573	100	0	29.5	1.22	0.38	4.99	0	29.5	1.22	0.38	4.99
Very coarse sand (percent)	573	573	100	0	26.2	1.72	0.815 T	5.67	0	26.2	1.72	0.815 T	5.67
Coarse sand (percent)	573	573	100	0.02	45.5	5.71	1.77	23.8	0.02	45.5	5.71	1.77	23.8
Medium sand (percent)	573	573	100	0.135 T	77.3	15.5	5.63 T	54.9	0.135 T	77.3	15.5	5.63 T	54.9
Fine sand (percent)	573	573	100	0.29	58.7	10.1	7.68	27.7	0.29	58.7	10.1	7.68	27.7
Very fine sand (percent)	573	573	100	0.17	66.8	12.8	10.9	30.6	0.17	66.8	12.8	10.9	30.6
Fines (percent)	573	573	100	0.62 T	101 T	51.4	57.7 T	90.7 T	0.62 T	101 T	51.4	57.7 T	90.7 T
Coarse silt (percent)	573	573	100	0	60.2	18.8	18	41.5 T	0	60.2	18.8	18	41.5 T
Medium silt (percent)	573	573	100	0	48.2	12.7	12.8	26.4	0	48.2	12.7	12.8	26.4
Fine silt (percent)	573	573	100	0	27.5	7.58	7.47	16.3	0	27.5	7.58	7.47	16.3
Very fine silt (percent)	573	573	100	0.01	24.7	4.91	4.66	11.1 T	0.01	24.7	4.91	4.66	11.1 T
8-9 Phi clay (percent)	573	573	100	0	16.3	3.02	2.83	7.01	0	16.3	3.02	2.83	7.01
>9 Phi clay (percent)	573	573	100	0	16.6	4.5	4.36 T	9.86 T	0	16.6	4.5	4.36 T	9.86 T
Sulfide (S) (mg/kg)	252	223	88.5	0.2 J	998	24.9	4.6 J	64 J	0.2 U	998	22.1	3.8	60.9
Ammonia (mg/kg)	257	257	100	1.5 J	352	88.9	78.3	188	1.5 J	352	88.9	78.3	188
Specific Gravity (NA)	551	551	100	1.17	2.17	1.51	1.46	1.81 T	1.17	2.17	1.51	1.46	1.81 T
Metals (mg/kg)													
Aluminum (mg/kg)	562	562	100	5060	41200 T	22700	23600	33800	5060	41200 T	22700	23600	33800
Antimony (mg/kg)	562	380	67.6	0.04 J	19.3 J	0.537	0.18 J	1.82 J	0.04 J	19.3 J	0.402	0.15 UJ	1.05 J
Arsenic (mg/kg)	562	562	100	0.97	34	4.16	3.67 J	7.99 J	0.97	34	4.16	3.67 J	7.99 J
Cadmium (mg/kg)	562	559	99.5	0.043 J	5.41	0.304	0.246 T	0.714	0.043 J	5.41	0.303	0.243 J	0.711 J
Chromium (mg/kg)	562	556	98.9	8.7	224	31.7	31.1	48.5	8.7	224	31.8	31.2	48.4
Copper (mg/kg)	562	562	100	9.7	1080	53.8	39.1	134	9.7	1080	53.8	39.1	134
Lead (mg/kg)	562	562	100	2.5	1290 J	28.9	14.8	67.4	2.5	1290 J	28.9	14.8	67.4
Mercury (mg/kg)	562	556	98.9	0.006 J	2.01	0.0907	0.065	0.242	0.006 J	2.01	0.09	0.065	0.235
Nickel (mg/kg)	562	545	97	9.2	200 JT	24.8	24.5	34.2	9.2	200 JT	24.7	24.5	34.1 T
Selenium (mg/kg)	562	341	60.7	0.03 J	0.56	0.15	0.15 J	0.26	0.03 UJ	0.56	0.133	0.12 JT	0.25 UJ
Silver (mg/kg)	562	562	100	0.024 J	4.44	0.226	0.197 J	0.531	0.024 J	4.44	0.226	0.197 J	0.531
Zinc (mg/kg)	562	562	100	40.9	1940	139	109	301	40.9	1940	139	109	301
Chromium hexavalent (mg/kg)	18	5	27.8	0.2 J	0.7 J	0.39	0.35 JT	0.4 JT	0.2 UJT	0.7 J	0.258	0.2 UJT	0.4 JT
Butyltins (ug/kg)													
Butyltin ion (ug/kg)	116	111	95.7	0.16 J	540	15.1	2.7	51	0.091 U	540	14.5	2.3 J	51
Dibutyltin ion (ug/kg)	116	116	100	0.14 J	2700	69.9	9	150	0.14 J	2700	69.9	9	150
Tributyltin ion (ug/kg)	116	115	99.1	0.45 J	46000	608	28	510	0.23 U	46000	603	26	510
Tetrabutyltin (ug/kg)	116	52	44.8	0.27 J	1000	24.6	1.6	29 T	0.16 U	1000	11.2	0.3 U	6.6
PCB Aroclors (ug/kg)													
Aroclor 1016 (ug/kg)	520	0	0						1.1 U	1310 UJ	8.32	2.1 U	19.1 U
Aroclor 1242 (ug/kg)	520	11	2.12	15	1200	194	110	290	1.1 U	1330 UJ	12.4	2.2 U	30
Aroclor 1248 (ug/kg)	520	200	38.5	2.59 J	22300 J	189	15 J	380	1.4 U	22300 J	76.8	3.88 J	106
Aroclor 1254 (ug/kg)	520	216	41.5	0.851 J	2100	112	23.6	522	0.67 U	2100	50.9	4.3 UJ	170 J
Aroclor 1260 (ug/kg)	520	389	74.8	1.3 J	5070 J	67.9	12	253 J	0.86 U	5070 J	52.7	9.08	200
Aroclor 1262 (ug/kg)	520	0	0						1 U	1220 UJ	7.94	2.02 U	18 UJ
Aroclor 1268 (ug/kg)	520	18	3.46	1.89 J	55	15.5	11.2 J	44.7	0.88 U	1050 UJ	7.95	1.9 U	18.3 UJ
Aroclor 1221 (ug/kg)	520	13	2.5	10.7	109	46.5	40.1	99.4	2 U	2420 UJ	15.8	3.8 UJ	41.9 UJ
Aroclor 1232 (ug/kg)	520	0	0						1.8 U	2190 UJ	13.4	3.44 U	31 U
Polychlorinated biphenyls (ug/kg)	520	423	81.3	0.851 JT	27400 JT	216	29 JT	750 JT	0.851 JT	27400 JT	179	18.5 JT	679 JT
Organochlorine Pesticides (ug/kg)													
2,4'-DDD (ug/kg)	508	455	89.6	0.045 NJ	616 NJ	11.1	0.854 NJ	37.4 JT	0.0303 U	616 NJ	10	0.719 NJ	31.7 J
2,4'-DDE (ug/kg)	508	196	38.6	0.04 NJ	288 NJ	5.87	0.865 NJ	21.5 NJ	0.0305 UJ	288 NJ	2.36	0.184 U	6.02 U
2,4'-DDT (ug/kg)	508	307	60.4	0.093 J	1640 J	17.7	0.492 NJ	20.4 J	0.0403 UJ	1640 J	10.8	0.288 J	8.61 JT
4,4'-DDD (ug/kg)	508	491	96.7	0.051 NJ	2780 NJ	36.9	2.15 J	83.3 J	0.0467 U	2780 NJ	35.7	2.11 J	77.5 J

Table 4-2. Summary Statistics of Chemical Concentrations in Surface Interval Sediment Samples.

				Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	Number of Samples	Number Detected	% Detected	Minimum	Maximum	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th
4,4'-DDE (ug/kg)	508	483	95.1	0.087 J	2240 J	15.5	2.21 J	21.7 J	0.0438 U	2240 J	14.8	2.17 J	20.6 JT
4,4'-DDT (ug/kg)	489	405	82.8	0.077 J	12000 NJ	86.6	1.3 J	91.9 J	0.0525 U	12000 NJ	71.8	0.882 J	62.3 J
Total of 4,4'-DDD, -DDE, -DDT (ug/kg)	508	495	97.4	0.051 JT	15300 JT	123	5.4 JT	228 JT	0.051 JT	15300 JT	119	5.31 JT	206 JT
Aldrin (ug/kg)	461	156	33.8	0.052 J	691 J	7.64	0.688 NJ	11.8 NJ	0.0298 UJ	691 J	2.7	0.166 UJ	3.6 J
alpha-Hexachlorocyclohexane (ug/kg)	497	174	35	0.047 J	10 J	0.631	0.264 NJ	2.24 J	0.0315 U	10 J	0.335	0.125 J	1.19 NJ
beta-Hexachlorocyclohexane (ug/kg)	508	401	78.9	0.062 J	26.4	2.76	1.91 NJ	7.75 NJ	0.0323 U	26.4	2.25	1.22 NJ	7.01 J
delta-Hexachlorocyclohexane (ug/kg)	507	132	26	0.092 J	21.2 NJ	0.688	0.368 JT	1.66 NJ	0.0638 UJ	21.2 NJ	0.391	0.142 UJ	0.895 J
gamma-Hexachlorocyclohexane (ug/kg)	508	134	26.4	0.15	10.9 JT	2.78	2.03 NJ	7.31 NJ	0.0681 UJ	13.4 U	0.953	0.152 U	5.2 NJT
cis-Chlordane (ug/kg)	508	310	61	0.042 J	203 J	1.98	0.285 J	3.97 NJ	0.0297 U	203 J	1.29	0.205	2.45 NJ
trans-Chlordane (ug/kg)	508	282	55.5	0.026 J	445 NJ	2.36	0.308 J	1.35 J	0.0188 UJ	445 NJ	1.37	0.163 JT	0.976 NJ
Oxychlordane (ug/kg)	507	57	11.2	0.057 J	24.4 NJ	2.75	1.33 J	7.61 J	0.0161 UJ	24.4 NJ	0.392	0.0305 U	1.67 J
cis-Nonachlor (ug/kg)	508	193	38	0.06 NJ	378 NJ	3.01	0.387 J	3.65 NJ	0.0372 UJ	378 NJ	1.27	0.182 J	1.44 J
trans-Nonachlor (ug/kg)	507	238	46.9	0.038 NJ	226 NJ	2.28	0.294	2.99 NJ	0.0342 U	226 NJ	1.17	0.198 J	1.29 JT
Total Chlordanes (ug/kg)	508	417	82.1	0.042 JT	669 JT	6.14	0.991 JT	9.15 JT	0.0393 UT	669 JT	5.09	0.831 JT	8.07 JT
Dieldrin (ug/kg)	503	124	24.7	0.068 J	356 J	3.81	0.292 NJ	3.96 J	0.0457 U	356 J	1.11	0.121 NJ	0.869 U
alpha-Endosulfan (ug/kg)	508	29	5.71	0.048 J	44.1 NJ	3.63	0.403	13.6 NJ	0.0257 U	44.1 NJ	0.327	0.048 J	0.433 U
beta-Endosulfan (ug/kg)	508	110	21.7	0.105 J	235 NJ	2.58	0.385 NJ	0.741 J	0.0227 U	235 NJ	0.676	0.12 UJ	0.598 U
Endosulfan sulfate (ug/kg)	505	7	1.39	0.069 J	1.76 J	0.519	0.183 J	0.768 NJ	0.069 J	13 UJ	0.263	0.12 UJ	0.717 U
Endrin (ug/kg)	234	48	20.5	0.039 J	38.6 NJ	5.45	1.15 NJ	20.8 NJ	0.0354 UJ	38.6 NJ	1.25	0.0713 UJ	6.99 U
Endrin aldehyde (ug/kg)	508	11	2.17	0.107 NJ	2.6 NJ	0.647	0.271 NJ	1.46 NJ	0.039 UJ	7.69 U	0.179	0.0715 UJT	0.457 UJ
Endrin ketone (ug/kg)	508	130	25.6	0.078 NJ	90.1 NJ	1.95	0.754 NJ	4.1 NJ	0.0262 UJ	90.1 NJ	0.602	0.0605 U	1.88 NJ
Heptachlor (ug/kg)	508	39	7.68	0.046 J	3.1 J	0.39	0.177 JT	1.82 J	0.0271 UJ	5.36 U	0.153	0.051 U	0.369 U
Heptachlor epoxide (ug/kg)	507	10	1.97	0.147 J	5.11 NJ	1.46	1.06 J	2.36 NJ	0.0354 U	6.99 U	0.181	0.0649 U	0.448 NJ
Methoxychlor (ug/kg)	508	97	19.1	0.048 J	33.6 NJ	3.43	1.48 J	13.1 J	0.0373 U	33.6 NJ	0.788	0.0716 U	3.8 NJ
Mirex (ug/kg)	508	7	1.38	0.138 J	3.92 NJ	1.4	0.663 J	3.71 J	0.032 UJ	6.33 UJ	0.163	0.0588 U	0.384 UJ
Toxaphene (ug/kg)	499	0	0						8.39 U	1660 U	32.9	15.1 U	91.4 U
Semivolatile Organic Compounds (ug/kg)													
1,2,4-Trichlorobenzene (ug/kg)	562	8	1.42	3.1 J	310 J	46.4	8 J	23	1.9 U	830 U	15.4	3.5 U	49 U
1,2-Dichlorobenzene (ug/kg)	561	9	1.6	2.1 J	30 J	9.94	7.8 J	19 J	1.6 U	720 U	13.2	3.1 U	43 U
1,3-Dichlorobenzene (ug/kg)	561	1	0.178	5.3 J	5.3 J	5.3	5.3 J	5.3 J	2 U	890 U	16.1	3.7 U	52 U
1,4-Dichlorobenzene (ug/kg)	562	11	1.96	2.7 J	730 J	125	10 J	540	0.15 U	950 UJ	11.5	3.8 U	24 U
Azobenzene (ug/kg)	561	0	0						3 U	1400 U	24	5.6 U	73 U
2,4-Dinitrotoluene (ug/kg)	561	0	0						3.5 U	1600 U	27.9	6.5 U	85 U
2,6-Dinitrotoluene (ug/kg)	561	0	0						3.5 U	1600 U	27.9	6.5 U	85 U
2-Chloronaphthalene (ug/kg)	561	0	0						4.4 U	2000 U	35.7	8.3 UJ	110 U
2-Nitroaniline (ug/kg)	561	0	0						3.3 U	1500 U	26.9	6.3 U	82 U
3,3'-Dichlorobenzidine (ug/kg)	551	0	0						4.6 U	2100 U	37.3	8.6 U	120 U
3-Nitroaniline (ug/kg)	561	0	0						3.2 U	1500 U	25.9	6 U	79 U
4-Bromophenyl phenyl ether (ug/kg)	562	0	0						1.8 U	780 U	14.1	3.3 U	46 U
4-Chloroaniline (ug/kg)	561	1	0.178	10 J	10 J	10	10 J	10 J	2.6 U	1200 U	21	4.9 UJ	64 U
4-Chlorophenyl phenyl ether (ug/kg)	562	0	0						2.5 U	1200 U	20.1	4.6 U	65 U
4-Nitroaniline (ug/kg)	561	1	0.178	96	96	96	96	96	4.2 U	1900 U	34	7.9 U	110 U
Aniline (ug/kg)	554	13	2.35	5.6 J	670	80.9	15 J	230	1.9 UJ	830 U	16.9	3.5 UJ	53 U
Benzoic acid (ug/kg)	561	13	2.32	190 J	410	258	250	360	120 U	53000 U	959	230 U	2900 U
Benzyl alcohol (ug/kg)	561	45	8.02	5.7 J	90 J	13.2	11 J	20	4.6 U	2100 U	37.1	8.7 UJ	120 U
Bis(2-chloroethoxy) methane (ug/kg)	561	0	0						1.6 U	720 U	13	3 U	40 U
Bis(2-chloroethyl) ether (ug/kg)	561	3	0.535	7.3 J	14	11.8	14 J	14 J	3 U	1400 U	24	5.6 U	73 U
Carbazole (ug/kg)	562	372	66.2	1.7 J	56000	534	12 J	540	1.6 U	56000	355	6.4 U	230 J
Dibenzofuran (ug/kg)	562	537	95.6	0.25 J	46000	283	4.4	280	0.23 U	46000	270	3.8	250
Hexachlorobenzene (ug/kg)	562	273	48.6	0.025 J	338 J	2.91	0.784 J	5.12 J	0.016 U	1200 U	7.78	2.34 J	13.8 J
Hexachlorobutadiene (ug/kg)	562	34	6.05	0.065 J	7.7 J	1.32	0.476 J	5.93 J	0.0308 UJ	280 U	1.73	0.0601 UT	3.6 U
Hexachlorocyclopentadiene (ug/kg)	561	0	0						19 U	8300 U	149	35 U	460 U
Hexachloroethane (ug/kg)	561	39	6.95	0.381 J	1500 J	44.6	2.06 J	26	0.0456 UJ	1500 J	6.11	0.0931 UJ	8.99 U
Isophorone (ug/kg)	561	0	0						2 U	890 U	16.1	3.7 U	52 U
Nitrobenzene (ug/kg)	561	0	0						2.5 U	1200 U	20	4.6 U	61 U

Table 4-2. Summary Statistics of Chemical Concentrations in Surface Interval Sediment Samples.

Analyte	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Detected Concentrations Maximum	Detected Concentrations Mean	Detected Concentrations Median	Detected Concentrations 95th	Detected and Nondetected Concentrations Minimum	Detected and Nondetected Concentrations Maximum	Detected and Nondetected Concentrations Mean	Detected and Nondetected Concentrations Median	Detected and Nondetected Concentrations 95th
N-Nitrosodimethylamine (ug/kg)	558	0	0						7.5 U	3400 U	60.7	14 UJ	190 U
N-Nitrosodipropylamine (ug/kg)	561	0	0						3.9 U	1800 U	31.8	7.4 U	97 U
N-Nitrosodiphenylamine (ug/kg)	561	5	0.891	3.8 J	310	77.5	17	52 J	2.7 U	1300 U	22.5	5.1 U	72 U
Bis(2-chloroisopropyl) ether (ug/kg)	561	1	0.178	3.2 J	3.2 J	3.2	3.2 J	3.2 J	1.5 UJ	670 U	12	2.8 UJ	37 U
Phenols (ug/kg)													
2,3,4,6;2,3,5,6-Tetrachlorophenol coelution (ug/kg)	562	10	1.78	1 J	49	8.91	1.9 J	13 J	0.44 U	370 U	4.19	3.5 U	4.9 U
2,4,5-Trichlorophenol (ug/kg)	562	7	1.25	0.78 J	48 J	17.1	12 J	38 J	0.36 U	59 U	3.22	2.8 U	4.3 U
2,4,6-Trichlorophenol (ug/kg)	562	19	3.38	0.81 J	72	15.1	7.5 J	39 J	0.34 U	72	3.51	3.4 U	4.9 U
2,4-Dichlorophenol (ug/kg)	561	5	0.891	4.7 J	120	47.5	40	59	2.2 U	1000 U	18.2	4.2 U	59 U
2,4-Dimethylphenol (ug/kg)	518	1	0.193	100 J	100 J	100	100 J	100 J	6.8 UJ	2800 UJ	46.9	13 UJ	160 U
2,4-Dinitrophenol (ug/kg)	561	0	0						44 U	20000 U	357	83 UJ	1100 U
2-Chlorophenol (ug/kg)	561	1	0.178	54	54	54	54	54	2.1 U	940 U	17	4 U	54
2-Methylphenol (ug/kg)	561	2	0.357	69	290	180	69	69	4.2 U	1900 U	34.4	7.9 U	120 U
2-Nitrophenol (ug/kg)	561	0	0						3.2 U	1500 U	25.9	6 U	79 U
4,6-Dinitro-2-methylphenol (ug/kg)	561	0	0						2.1 U	940 U	16.9	4 U	52 U
4-Chloro-3-methylphenol (ug/kg)	561	8	1.43	3.2 J	14 J	5.83	4.3 J	6.4 J	2.6 U	1200 U	21	4.9 U	64 U
4-Methylphenol (ug/kg)	561	282	50.3	4 J	2500	77.9	16 J	390	3.6 U	2500	63.1	13 U	290 UJ
4-Nitrophenol (ug/kg)	561	0	0						0.0895 U	17000 U	280	65 UJ	850 U
Pentachlorophenol (ug/kg)	562	75	13.3	0.81 J	320	27.4	11 J	85	0.167 U	320	6.73	3.9 U	16 JT
Phenol (ug/kg)	561	248	44.2	2.8 J	680	17.4	11 J	33 J	2.4 U	1100 U	25.5	10 J	76 U
2,3,4,5-Tetrachlorophenol (ug/kg)	562	11	1.96	1.4 J	180 J	29.8	11 J	56	0.59 U	180 J	5.41	5.5 U	7.7 U
Phthalates (ug/kg)													
Dimethyl phthalate (ug/kg)	562	17	3.02	4.5 J	71	21.8	13 J	55	2.2 U	1000 U	18.4	4.2 UJ	59 U
Diethyl phthalate (ug/kg)	562	8	1.42	7 J	370	75.4	17	120	4.3 U	2000 U	36.1	8.1 U	120
Dibutyl phthalate (ug/kg)	561	224	39.9	3.7 J	1800	36.6	8 J	99	3.3 UJ	1800	38	7.5 J	130
Butylbenzyl phthalate (ug/kg)	561	151	26.9	2.2 J	2800	72.6	12 J	220 J	1.9 U	2800	32.7	4.4 U	140 U
Di-n-octyl phthalate (ug/kg)	562	12	2.14	4.3 J	1100	155	38 J	290	1.5 U	1100	15.2	2.8 U	47 U
Bis(2-ethylhexyl) phthalate (ug/kg)	561	314	56	4.2 J	440000 J	1920	100	2400 J	2.3 U	440000 J	1140	78	1100 UJ
Polycyclic Aromatic Hydrocarbons (ug/kg)													
2-Methylnaphthalene (ug/kg)	562	532	94.7	0.6 J	630000	1960	7.3	320	0.51 U	630000	1850	6.6	270
Acenaphthene (ug/kg)	562	538	95.7	0.22 J	600000	3530	10	3000	0.22 J	600000	3380	8.8	2700
Acenaphthylene (ug/kg)	562	539	95.9	0.5 J	54000	290	8.9	400	0.33 U	54000	279	8.5	350
Anthracene (ug/kg)	562	545	97	0.35 J	390000	2640	19	1600	0.33 U	390000	2560	18	1600
Fluorene (ug/kg)	562	541	96.3	0.37 J	340000	1860	9.1	1650 T	0.26 U	340000	1790	8.5	1600
Naphthalene (ug/kg)	562	375	66.7	2.8	1500000	5380	30	1200	0.43 U	1500000	3590	15	520
Phenanthrene (ug/kg)	562	552	98.2	0.53 J	1700000	12100	67	6600	0.53 J	1700000	11900	58	6200
Low Molecular Weight PAH (ug/kg)	562	552	98.2	0.91 JT	5130000 T	25800	149 JT	18000 T	0.91 JT	5130000 T	25300	143 T	15400 T
Dibenz(a,h)anthracene (ug/kg)	562	552	98.2	0.47 J	25000	281	12	500 J	0.38 U	25000	276	12	425 T
Benz(a)anthracene (ug/kg)	562	551	98	0.5 J	320000	2580	65.5 T	3100	0.24 U	320000	2530	60	2800
Benzo(a)pyrene (ug/kg)	562	551	98	0.86 J	340000	3030	87	4600	0.33 U	340000	2970	83	4600
Benzo(b)fluoranthene (ug/kg)	562	550	97.9	1.1 J	300000	2790	104 T	3900	0.7 U	300000	2730	100	3900
Benzo(g,h,i)perylene (ug/kg)	562	552	98.2	0.56 J	180000	2140	73	3700	0.45 U	180000	2100	70	3700
Benzo(k)fluoranthene (ug/kg)	562	547	97.3	0.77 J	100000	926	35	1200	0.48 U	100000	901	32	1200
Chrysene (ug/kg)	562	548	97.5	2 J	370000	3040	92	3700	0.6 U	370000	2960	88	3200
Fluoranthene (ug/kg)	562	554	98.6	1.1 J	1200000	8170	130	7600	0.77 U	1200000	8050	130	7400
Indeno(1,2,3-cd)pyrene (ug/kg)	562	551	98	0.95 J	210000	2150	71	3500	0.36 U	210000	2110	67	3300
Pyrene (ug/kg)	562	554	98.6	3.4	1300000	9640	140	9800	0.54 U	1300000	9510	140	8600
High Molecular Weight PAH (ug/kg)	562	556	98.9	1.7 JT	4350000 T	34500	832 T	41400 T	1 UT	4350000 T	34100	817 T	39000 T
Polycyclic Aromatic Hydrocarbons (ug/kg)	562	557	99.1	0.91 JT	7950000 T	60000	1010 T	57100 T	0.91 JT	7950000 T	59500	985 T	55700 T
Herbicides (ug/kg)													
Dalapon (ug/kg)	65	0	0						0.0662 U	1.44 U	0.822	0.821 U	1.07 U
Dicamba (ug/kg)	66	0	0						0.238 U	5.16 U	2.94	2.91 U	3.85 U
MCPA (ug/kg)	66	2	3.03	4.14	356 J	180	4.14	4.14	0.16 U	356 J	7.38	1.99 U	2.84 U
Dichloroprop (ug/kg)	66	0	0						0.12 U	2.61 U	1.49	1.47 U	1.95 U
2,4-D (ug/kg)	66	7	10.6	10.8	3250 J	497	30.2	101	0.0753 U	3250 J	53.5	0.964 U	28.5

Table 4-2. Summary Statistics of Chemical Concentrations in Surface Interval Sediment Samples.

Analyte	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Detected Concentrations Maximum	Detected Concentrations Mean	Detected Concentrations Median	Detected Concentrations 95th	Detected and Nondetected Concentrations Minimum	Detected and Nondetected Concentrations Maximum	Detected and Nondetected Concentrations Mean	Detected and Nondetected Concentrations Median	Detected and Nondetected Concentrations 95th
Silvex (ug/kg)	66	0	0						0.11 U	2.4 U	1.37	1.35 U	1.79 U
2,4,5-T (ug/kg)	66	0	0						0.11 U	2.39 U	1.36	1.35 U	1.78 U
2,4-DB (ug/kg)	66	1	1.52	344 J	344 J	344	344 J	344 J	0.111 U	344 J	6.65	1.47 U	2.16 U
Dinoseb (ug/kg)	66	0	0						0.152 U	3.31 U	1.79	1.72 U	2.47 U
MCPP (ug/kg)	66	1	1.52	193 J	193 J	193	193 J	193 J	0.146 U	193 J	4.71	1.79 U	2.5 U
Dioxins/Furans (pg/p)													
Tetrachlorodibenzo-p-dioxin homologs (pg/g)	75	65	86.7	0.017	416.466	17.3	0.57	50.687	0.006 U	416.466	15	0.347	50.687
Pentachlorodibenzo-p-dioxin homologs (pg/g)	76	61	80.3	0.031	133.449	4.92	0.388	7.639	0.009 U	133.449	3.96	0.304	7.639
Hexachlorodibenzo-p-dioxin homologs (pg/g)	76	75	98.7	0.053	596.039	31.4	5.323	147.2	0.053	596.039	31	5.31	147.2
Heptachlorodibenzo-p-dioxin homologs (pg/g)	76	76	100	1.324	7095.84	243	40.814	938.405	1.324	7095.84	243	40.814	938.405
Octachlorodibenzo-p-dioxin (pg/g)	76	59	77.6	6.462 JT	19201.141 J	826	268.772	2065.098 J	5.93 U	19201.141 J	646	147.439	1616.044
Tetrachlorodibenzofuran homologs (pg/g)	76	70	92.1	0.047	3878.27	88.5	1.492	120.827	0.01 U	3878.27	81.5	1.166	120.827
Pentachlorodibenzofuran homologs (pg/g)	76	74	97.4	0.069	1599.126	72.6	3.798	102.016	0.01 U	1599.126	70.7	3.372 T	102.016
Hexachlorodibenzofuran homologs (pg/g)	76	75	98.7	0.201	1301.767	62.5	5.365	307.668	0.095 UT	1301.767	61.7	5.144 T	307.668
Heptachlorodibenzofuran homologs (pg/g)	76	75	98.7	0.337	535.271	50.2	9.638	256.269	0.19 UT	535.271	49.6	9.504	256.269
Octachlorodibenzofuran (pg/g)	76	56	73.7	1.021 J	535.23	45	14.214 J	110.931	0.137 U	535.23	39.4	8.55	110.931
2,3,7,8-Tetrachlorodibenzo-p-dioxin (pg/g)	76	13	17.1	0.109 J	111.091	9.38	0.346	7.227	0.006 U	111.091	1.64	0.027 U	0.384 U
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (pg/g)	76	39	51.3	0.015 J	20.536	1.01	0.151 J	1.096 J	0.006 U	20.536	0.561	0.072 J	1.066 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (pg/g)	76	39	51.3	0.011 J	9.384	0.683	0.0825 JT	4.276 J	0.007 U	9.384	0.471	0.094 U	1.454 U
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (pg/g)	76	69	90.8	0.053 J	35.297	2.68	1.029 J	8.283	0.007 U	35.297	2.49	0.992	8.283
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (pg/g)	76	66	86.8	0.041 J	16.945	1.52	0.417 JT	6.051	0.006 U	16.945	1.35	0.333 J	6.051
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (pg/g)	76	59	77.6	0.863 JT	2410.3	99.4	30.843	246.964	0.734 U	2410.3	77.8	17.561	206.11
2,3,7,8-Tetrachlorodibenzofuran (pg/g)	76	43	56.6	0.046 J	423.067 T	26.7	1.391	93.207	0.012 U	423.067 T	15.2	0.303 U	27.739
1,2,3,7,8-Pentachlorodibenzofuran (pg/g)	76	51	67.1	0.017 J	515.779 T	17.9	0.497 J	22.148	0.005 U	515.779 T	18.2	0.181 U	22.148
2,3,4,7,8-Pentachlorodibenzofuran (pg/g)	76	52	68.4	0.011 J	329.729 T	12.8	0.563 J	42.109	0.005 U	329.729 T	8.77	0.16 U	10.298
1,2,3,4,7,8-Hexachlorodibenzofuran (pg/g)	76	59	77.6	0.033 J	553.368 JT	21.6	1.036 J	43.036	0.026 U	844.251 U	27.9	0.482 J	43.036
1,2,3,6,7,8-Hexachlorodibenzofuran (pg/g)	76	62	81.6	0.015 J	233.579 JT	6.22	0.4 JT	10.929	0.005 U	233.579 JT	8.04	0.258 J	11.108
1,2,3,7,8,9-Hexachlorodibenzofuran (pg/g)	76	14	18.4	0.135 J	19.303	3	0.524 J	7.45	0.003 U	19.303	0.608	0.048 U	2.71 J
2,3,4,6,7,8-Hexachlorodibenzofuran (pg/g)	76	53	69.7	0.014 J	46.311 JT	3.23	0.418 JT	13.452	0.004 U	46.311 JT	2.29	0.209 J	6.112 J
1,2,3,4,6,7,8-Heptachlorodibenzofuran (pg/g)	76	66	86.8	0.154 J	302.4	22.7	4.759	75.986	0.061 U	302.4	19.8	3.149	75.986
1,2,3,4,7,8,9-Heptachlorodibenzofuran (pg/g)	76	50	65.8	0.016 J	121.856	7.42	0.625 J	32.506 J	0.009 U	121.856	4.94	0.285 J	9.891
2,3,7,8-TCDD TEQ (pg/g)	76	76	100	0.00684 JT	322 JT	12.6	0.831 JT	37.4 JT	0.00684 JT	322 JT	12.6	0.831 JT	37.4 JT
Volatile Organic Compounds (ug/kg)													
1,1,1,2-Tetrachloroethane (ug/kg)	147	0	0						0.038 U	0.12 U	0.0577	0.058 U	0.074 U
1,1,1-Trichloroethane (ug/kg)	147	0	0						0.072 U	0.23 U	0.112	0.11 U	0.15 U
1,1,2,2-Tetrachloroethane (ug/kg)	147	1	0.68	3.4	3.4	3.4	3.4	3.4	0.12 U	7.7 UJ	0.256	0.18 U	0.24 U
1,1,2-Trichloroethane (ug/kg)	147	0	0						0.072 U	0.23 U	0.112	0.11 U	0.15 U
1,1-Dichloroethane (ug/kg)	147	0	0						0.07 U	0.23 U	0.108	0.11 U	0.14 U
Vinylidene chloride (ug/kg)	147	0	0						0.1 U	0.32 U	0.156	0.16 U	0.2 U
1,2,3-Trichloropropane (ug/kg)	147	1	0.68	0.5 J	0.5 J	0.5	0.5 J	0.5 J	0.14 U	0.5 J	0.21	0.21 U	0.27 U
1,2-Dichloroethane (ug/kg)	147	2	1.36	0.35 J	0.36 J	0.355	0.35 J	0.35 J	0.038 U	0.36 J	0.0617	0.058 U	0.075 U
1,2-Dichloropropane (ug/kg)	147	0	0						0.043 U	0.14 U	0.0651	0.065 U	0.084 U
Methylethyl ketone (ug/kg)	39	39	100	2.1 J	15 J	4.25	3.8 J	6.7 J	2.1 J	15 J	4.25	3.8 J	6.7 J
2-Chloroethyl vinyl ether (ug/kg)	147	0	0						0.19 U	0.58 U	0.282	0.28 U	0.36 U
Methyl N-butyl ketone (ug/kg)	147	0	0						0.78 U	2.5 UJ	1.22	1.2 U	1.6 U
Methyl isobutyl ketone (ug/kg)	147	0	0						0.3 U	0.93 UJ	0.447	0.45 U	0.58 U
Acetone (ug/kg)	147	7	4.76	25 T	53	30.1	27	28	2.2 U	53	10.7	7.6 U	27
Acrolein (ug/kg)	28	0	0						0.7 U	1.4 U	1.02	0.97 U	1.3 U
Acrylonitrile (ug/kg)	147	0	0						0.28 U	0.89 UJ	0.429	0.43 U	0.55 U
Benzene (ug/kg)	147	23	15.6	0.074 J	1100	83.6	0.41 J	16	0.048 U	1100	13.1	0.075 U	0.72 J
Bromochloromethane (ug/kg)	147	0	0						0.073 U	0.24 U	0.114	0.12 U	0.15 U
Bromodichloromethane (ug/kg)	147	0	0						0.083 U	0.27 U	0.13	0.13 U	0.17 U
Bromoform (ug/kg)	147	0	0						0.056 U	0.18 U	0.0861	0.085 UT	0.11 U
Bromomethane (ug/kg)	147	0	0						0.45 U	1.5 U	0.688	0.69 U	0.88 U
Carbon disulfide (ug/kg)	147	16	10.9	0.23 J	4.5	0.702	0.36 JT	0.75 J	0.16 U	4.5	0.292	0.25 U	0.36 JT

Table 4-2. Summary Statistics of Chemical Concentrations in Surface Interval Sediment Samples.

	Number	Number	%	Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	of Samples	Detected	Detected	Minimum	Maximum	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th
Carbon tetrachloride (ug/kg)	147	0	0						0.12 U	0.39 U	0.187	0.19 U	0.24 U
Chlorobenzene (ug/kg)	147	22	15	0.14 JT	2.8	0.666	0.48 J	1.3	0.085 U	2.8	0.212	0.14 U	0.62 J
Chlorodibromomethane (ug/kg)	147	0	0						0.083 U	0.27 U	0.13	0.13 U	0.17 U
Chloroethane (ug/kg)	147	0	0						0.34 U	1.1 U	0.522	0.52 U	0.67 U
Chloroform (ug/kg)	147	17	11.6	0.087 J	0.15 J	0.121	0.13 J	0.15 J	0.068 U	0.22 U	0.112	0.11 U	0.14 U
Chloromethane (ug/kg)	147	0	0						0.24 U	0.74 U	0.356	0.36 U	0.46 U
cis-1,3-Dichloropropene (ug/kg)	147	0	0						0.038 U	0.12 U	0.0577	0.058 U	0.074 U
Methylene bromide (ug/kg)	147	0	0						0.1 U	0.32 U	0.156	0.16 U	0.2 U
Dichlorodifluoromethane (ug/kg)	147	0	0						0.14 U	0.43 U	0.208	0.21 U	0.27 U
Ethylbenzene (ug/kg)	147	23	15.6	0.11 J	5700	353	0.35 J	9.8	0.087 U	5700	55.4	0.14 U	0.63 J
Methyl iodide (ug/kg)	147	0	0						0.82 U	2.6 U	1.29	1.3 UJ	1.6 U
Isopropylbenzene (ug/kg)	147	34	23.1	0.073 J	55	5.45	1.1 J	31	0.054 U	55	1.33	0.088 U	3
m,p-Xylene (ug/kg)	147	22	15	0.22 J	100	7.77	1.1	10	0.16 U	100	1.37	0.25 U	2.1
Methylene chloride (ug/kg)	147	1	0.68	0.88 J	0.88 J	0.88	0.88 J	0.88 J	0.4 U	4.2 U	1.64	1.6 U	3.3 U
Methyl tert-butyl ether (ug/kg)	147	9	6.12	0.07 J	0.84 J	0.319	0.26 J	0.69 J	0.048 U	0.84 J	0.0892	0.074 U	0.15 J
o-Xylene (ug/kg)	147	36	24.5	0.14 J	170	8.14	0.43 J	17	0.091 U	170	2.1	0.15 U	2.5
Styrene (ug/kg)	147	1	0.68	1.1	1.1	1.1	1.1	1.1	0.09 U	1.1	0.169	0.15 U	0.28 U
Tetrachloroethene (ug/kg)	147	0	0						0.12 U	0.38 U	0.182	0.18 U	0.23 U
Toluene (ug/kg)	147	6	4.08	0.29 JT	27	6.72	1.6	6.2	0.19 U	27	0.55	0.29 U	0.45 U
trans-1,2-Dichloroethene (ug/kg)	147	0	0						0.24 U	0.74 U	0.356	0.36 U	0.46 U
trans-1,3-Dichloropropene (ug/kg)	147	0	0						0.054 U	0.17 U	0.0822	0.082 U	0.11 U
1,4-Dichloro-trans-2-butene (ug/kg)	147	0	0						0.62 U	2 UJ	0.966	0.95 U	1.3 U
Trichloroethene (ug/kg)	147	6	4.08	0.11 J	0.91 J	0.363	0.28 J	0.42 J	0.076 U	0.91 J	0.129	0.12 U	0.16 U
Trichlorofluoromethane (ug/kg)	147	0	0						0.099 U	0.32 U	0.154	0.15 U	0.2 U
Vinyl acetate (ug/kg)	8	0	0						0.49 UJ	0.74 U	0.628	0.65 U	0.71 U
Vinyl chloride (ug/kg)	147	0	0						0.11 U	0.33 U	0.162	0.16 U	0.21 U
Ethylene dibromide (ug/kg)	147	0	0						0.062 U	0.2 U	0.0966	0.095 U	0.13 U
Xylene (ug/kg)	147	38	25.9	0.14 JT	270 T	12.2	0.68 JT	27 T	0.14 JT	270 T	3.33	0.25 UT	4.5 T
Petroleum													
Diesel Range Hydrocarbons (mg/kg)	216	210	97.2	10 JT	39000 J	763	120 J	1700 J	10 JT	39000 J	742	110 J	1700 J
Gasoline Range Hydrocarbons (mg/kg)	215	27	12.6	1.9 T	1600 J	100	12 J	155 JT	1.3 UJ	1600 J	14.7	2.2 U	25 JT
Residual Range Organics (mg/kg)	216	203	94	14.5 JT	18000 J	1060	470 J	2600 J	13 UT	18000 J	1000	450 J	2600 J
Total Petroleum Hydrocarbons (mg/kg)	216	213	98.6	10 JT	58600 JT	1780	580 JT	4300 JT	10 JT	58600 JT	1750	570 JT	4300 JT

Notes:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte).
Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Table 4-3. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples.

				Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	Number of Samples	Number Detected	% Detected	Minimum	Maximum	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th
Conventionals (percent)													
Total solids (percent)	602	602	100	32	92.3	65.4	64.5	79.9	32	92.3	65.4	64.5	79.9
Total organic carbon (percent)	510	501	98.2	0.03 J	35.5	2.02	1.88	4.51	0.02 U	35.5	1.98	1.85 T	4.51
Medium gravel (percent)	516	516	100	0	47.9	1.04	0.01	4.08	0	47.9	1.04	0.01	4.08
Fine gravel (percent)	516	516	100	0 T	34	1.16	0.43	3.26	0 T	34	1.16	0.43	3.26
Very coarse sand (percent)	516	516	100	0.0133 T	26.4	1.41	0.71	4.81 T	0.0133 T	26.4	1.41	0.71	4.81 T
Coarse sand (percent)	516	516	100	0.09	50.7 T	4.94	1.79	22.2	0.09	50.7 T	4.94	1.79	22.2
Medium sand (percent)	516	516	100	0.163 T	83.9	18.2	7.65	63.8 T	0.163 T	83.9	18.2	7.65	63.8 T
Fine sand (percent)	516	516	100	0.09	63.4	11.5	8.07	31.3	0.09	63.4	11.5	8.07	31.3
Very fine sand (percent)	516	516	100	0.3	46.1	10.5	10 T	22.2	0.3	46.1	10.5	10 T	22.2
Fines (percent)	516	516	100	0.29 T	101 T	50.2	56.8 T	86.9 T	0.29 T	101 T	50.2	56.8 T	86.9 T
Coarse silt (percent)	516	516	100	0	40.2	11.7	12.1	24.4	0	40.2	11.7	12.1	24.4
Medium silt (percent)	516	516	100	0	37.2	12.6	13.8	24.6	0	37.2	12.6	13.8	24.6
Fine silt (percent)	516	516	100	0 T	27.4	9.22	9.94	18.2	0 T	27.4	9.22	9.94	18.2
Very fine silt (percent)	516	516	100	0	17.1	5.99	6.44	12.5	0	17.1	5.99	6.44	12.5
8-9 Phi clay (percent)	516	516	100	0 T	16.4	3.91	3.92 T	8.34 T	0 T	16.4	3.91	3.92 T	8.34 T
>9 Phi clay (percent)	516	516	100	0	22.9	6.81	6.81	14.9	0	22.9	6.81	6.81	14.9
Specific Gravity (NA)	516	516	100	1.2	2.55	1.7	1.63	2.07	1.2	2.55	1.7	1.63	2.07
Metals (mg/kg)													
Aluminum (mg/kg)	510	510	100	5960 J	40700	21600	22100	33300	5960 J	40700	21600	22100	33300
Antimony (mg/kg)	510	268	52.5	0.07 J	18.2 J	1.03	0.27 J	4.59 J	0.04 UJ	18.2 J	0.599	0.18 UJ	1.82 J
Arsenic (mg/kg)	510	510	100	0.8	44.5 J	4.36	3.79	7.62 JT	0.8	44.5 J	4.36	3.79	7.62 JT
Cadmium (mg/kg)	510	503	98.6	0.034 J	7.03	0.339	0.28 J	0.688	0.034 J	7.03	0.336	0.277	0.688
Chromium (mg/kg)	510	510	100	9.29	249 T	31.5	30.2	50.5	9.29	249 T	31.5	30.2	50.5
Copper (mg/kg)	510	510	100	10.4	3290	52.7	36.9	109	10.4	3290	52.7	36.9	109
Lead (mg/kg)	510	510	100	2.06	3330 J	38.5	21.5	87.2 J	2.06	3330 J	38.5	21.5	87.2 J
Mercury (mg/kg)	510	489	95.9	0.007 J	4.14	0.191	0.101	0.581	0.006 U	4.14	0.184	0.096	0.575
Nickel (mg/kg)	510	510	100	10.2	716	26.9	24.5	33 T	10.2	716	26.9	24.5	33 T
Selenium (mg/kg)	510	225	44.1	0.04 J	0.23	0.109	0.11	0.18	0.03 U	0.25 UT	0.0915	0.08 JT	0.17 U
Silver (mg/kg)	510	501	98.2	0.016 J	2.47	0.278	0.24	0.69	0.016 J	2.47	0.274	0.231	0.69
Zinc (mg/kg)	510	510	100	34.2	1930	144	117	317	34.2	1930	144	117	317
Chromium hexavalent (mg/kg)	37	6	16.2	0.11 JT	0.3 J	0.218	0.2 J	0.3 J	0.11 JT	0.3 J	0.203	0.2 UJ	0.2 UT
Butyltins (ug/kg)													
Butyltin ion (ug/kg)	168	112	66.7	0.12 J	540 J	10.3	0.71 J	13	0.084 U	540 J	6.88	0.38 J	10
Dibutyltin ion (ug/kg)	171	127	74.3	0.087 J	6000 J	83	1.9	80	0.051 U	6000 J	61.7	0.81 J	70
Tributyltin ion (ug/kg)	171	103	60.2	0.32 J	36000 J	752	12.2 T	670	0.2 U	36000 J	453	1.5 J	550
Tetrabutyltin (ug/kg)	171	42	24.6	0.22 J	510 J	26.4	1.4 J	14	0.15 U	510 J	6.64	0.21 U	4.9
PCB Aroclors (ug/kg)													
Aroclor 1016 (ug/kg)	461	0	0						1.09 U	846 UJ	7.15	1.67 U	12.5 U
Aroclor 1242 (ug/kg)	461	9	1.95	13.7 J	16400	2430	210 J	3260 J	1.11 U	16400	53.1	1.7 U	14.7 U
Aroclor 1248 (ug/kg)	461	196	42.5	1.73 J	1850 J	97.9	34	344	1.42 U	1850 J	47.5	3.5 J	162 J
Aroclor 1254 (ug/kg)	461	257	55.7	0.906	5520 J	157	59.5 J	545 J	0.662 U	5520 J	90.8	14.3 J	287 J
Aroclor 1260 (ug/kg)	461	275	59.7	1.78 J	3200 J	107	37.6	330 JT	0.85 U	3200 J	67.8	9.61 J	204
Aroclor 1262 (ug/kg)	461	0	0						1.02 U	846 UJ	6.84	1.56 U	11.7 U
Aroclor 1268 (ug/kg)	461	26	5.64	1.64 J	474 J	62.2	17.5 J	192 J	0.874 U	846 UJ	9.58	1.36 U	23.7 UJ
Aroclor 1221 (ug/kg)	461	0	0						2.02 U	1010 U	11.2	3.09 U	22.5 U
Aroclor 1232 (ug/kg)	461	0	0						1.82 U	916 U	10.4	2.79 U	20.4 U
Polychlorinated biphenyls (ug/kg)	461	289	62.7	0.906 T	21900 JT	390	116 JT	1110 JT	0.906 T	21900 JT	248	34.4 JT	755 JT
Organochlorine Pesticides (ug/kg)													
2,4'-DDD (ug/kg)	444	338	76.1	0.056 NJ	19300 NJ	139	2.48 J	105 J	0.0277 U	19300 NJ	106	1.19 J	74.1 J
2,4'-DDE (ug/kg)	444	174	39.2	0.041 J	632 NJ	12.7	1.74 NJ	35.4 J	0.0294 U	632 NJ	5.13	0.219 U	16.2 JT
2,4'-DDT (ug/kg)	444	226	50.9	0.085 J	4290 NJ	52.4	1.21 NJ	93.8 NJ	0.0389 UJ	4290 NJ	26.8	0.316 UJ	30.6 J
4,4'-DDD (ug/kg)	444	357	80.4	0.093	51800 NJ	331	8.22 J	374 NJ	0.0415 U	51800 NJ	266	3.73 J	291 J
4,4'-DDE (ug/kg)	444	329	74.1	0.069 J	2690 J	27.1	4.44 NJ	59.5 NJ	0.0389 U	2690 J	20.2	2.4 NJ	48.5 J

Table 4-3. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples.

Analyte	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Maximum	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th
4,4'-DDT (ug/kg)	425	324	76.2	0.071 NJ	22000 J	216	1.88 J	341 J	0.049 UJ	22000 J	164	0.97 NJ	246 J
Total of 4,4'-DDD, -DDE, -DDT (ug/kg)	444	379	85.4	0.08 JT	72700 JT	519	12.2 JT	733 JT	0.049 UJT	72700 JT	443	8.64 JT	609 JT
Aldrin (ug/kg)	409	78	19.1	0.119 J	1340 J	37.7	1.89 NJ	111 JT	0.0269 UJ	1340 J	7.38	0.179 UJ	9.81 JT
alpha-Hexachlorocyclohexane (ug/kg)	424	65	15.3	0.074 J	98.9 NJ	3.01	0.604 J	5.75 NJ	0.0288 U	98.9 NJ	0.736	0.205 U	1.73 U
beta-Hexachlorocyclohexane (ug/kg)	444	318	71.6	0.057 JT	318 NJ	5.3	2.75 NJ	12.9 NJ	0.0291 U	318 NJ	3.96	1.9 NJT	11.2 JT
delta-Hexachlorocyclohexane (ug/kg)	426	15	3.52	0.131 J	45.4 NJ	6.48	0.512 J	24.8 NJ	0.0615 UJ	45.4 NJ	0.845	0.384 UJ	1.58 J
gamma-Hexachlorocyclohexane (ug/kg)	444	49	11	0.548 NJ	172 NJ	8.28	2.93 NJ	16.8 NJT	0.0657 U	172 NJ	1.56	0.444 U	4.6 NJ
cis-Chlordane (ug/kg)	444	194	43.7	0.046 J	630 J	7.4	1.03 J	20 NJ	0.0286 U	630 J	3.47	0.249 U	9.52 J
trans-Chlordane (ug/kg)	444	184	41.4	0.034 NJ	1140 J	12	0.504 J	8.24 J	0.0181 U	1140 J	5.11	0.149 UJ	4.13 NJ
Oxychlordane (ug/kg)	442	35	7.92	0.14 NJ	339 J	14.3	1.66 NJ	32.6 JT	0.0155 U	339 J	1.28	0.0998 U	1.66 NJ
cis-Nonachlor (ug/kg)	444	156	35.1	0.044 J	80.2 J	2.58	0.562 NJ	10.2 NJ	0.0359 U	80.2 J	1.19	0.27 UJ	4.36 J
trans-Nonachlor (ug/kg)	444	111	25	0.054 J	886 NJ	20	1.62 NJ	38.3 NJ	0.0312 U	886 NJ	5.21	0.235 U	15 JT
Total Chlordanes (ug/kg)	444	279	62.8	0.038 JT	2330 JT	24.3	2.22 JT	55 JT	0.0359 UT	2330 JT	15.4	0.83 JT	36.1 JT
Dieldrin (ug/kg)	444	9	2.03	0.303 NJ	51 J	9.52	0.87 J	15.6 NJ	0.044 UJ	51 J	0.65	0.267 UJ	0.937 U
alpha-Endosulfan (ug/kg)	444	8	1.8	0.125 NJ	35.8 NJ	4.98	0.495 J	1.34 NJ	0.0248 U	35.8 NJ	0.351	0.152 U	0.68 J
beta-Endosulfan (ug/kg)	444	70	15.8	0.094 J	170 J	3	0.322 NJ	2.18	0.0216 UJ	170 J	0.662	0.152 UJ	0.794 U
Endosulfan sulfate (ug/kg)	442	1	0.226	0.227 J	0.227 J	0.227	0.227 J	0.227 J	0.0635 U	33 UJ	0.673	0.38 UJ	1.16 UJ
Endrin (ug/kg)	198	69	34.8	0.141 NJ	311 J	18.3	4.07 NJ	58 NJ	0.0367 U	311 J	6.5	0.268 UJ	27.2 NJ
Endrin aldehyde (ug/kg)	444	19	4.28	0.069 NJ	407 NJ	46.8	8.13 NJ	166 NJ	0.039 UJ	407 NJ	2.29	0.225 U	1.39 U
Endrin ketone (ug/kg)	444	52	11.7	0.252 NJT	263 NJ	8.73	1.77 NJ	8.65 NJ	0.0253 U	263 NJ	1.24	0.168 U	2.26 NJ
Heptachlor (ug/kg)	444	22	4.95	0.126 J	5.75 NJ	1.34	0.676 NJ	3.68 NJ	0.0262 U	13.6 UJ	0.337	0.165 U	0.915 UJT
Heptachlor epoxide (ug/kg)	443	6	1.35	0.491 NJ	2.18 J	1.06	0.722 NJ	1.18 NJ	0.0341 U	17.7 U	0.375	0.21 U	0.726 U
Methoxychlor (ug/kg)	444	16	3.6	0.505 J	513 J	71.1	3.93 J	190 J	0.034 UJ	513 J	2.83	0.209 U	1.26 UJ
Mirex (ug/kg)	443	2	0.451	0.672 J	14 J	7.34	0.672 J	0.672 J	0.0309 U	16.1 U	0.359	0.185 U	0.656 U
Toxaphene (ug/kg)	444	0	0						8.09 U	4210 UJ	85.6	48.4 U	147 U
Semivolatile Organic Compounds (ug/kg)													
1,2,4-Trichlorobenzene (ug/kg)	511	8	1.57	2.6 JT	150	46	15 JT	92 J	1.7 U	3800 U	45.8	4.7 U	140 U
1,2-Dichlorobenzene (ug/kg)	511	19	3.72	2.5 J	210	27.8	8.5 J	120	1.5 U	3300 U	40	4.2 J	130 U
1,3-Dichlorobenzene (ug/kg)	511	3	0.587	3.3 J	56 J	21.4	4.9 J	4.9 J	1.8 U	4000 U	48	5 U	150 U
1,4-Dichlorobenzene (ug/kg)	555	31	5.59	0.36 J	180	15.7	7 J	32 J	0.14 U	4800 U	34.1	2.6 U	52 U
Azobenzene (ug/kg)	511	0	0						2.7 U	6000 U	72	7.4 U	220 U
2,4-Dinitrotoluene (ug/kg)	511	2	0.391	11 J	2100	1060	11 J	11 J	3.1 U	7000 U	87.7	8.7 U	260 U
2,6-Dinitrotoluene (ug/kg)	511	0	0						3.1 U	7000 U	84.1	8.7 U	260 U
2-Chloronaphthalene (ug/kg)	511	1	0.196	41	41	41	41	41	4 U	9000 U	108	12 U	330 U
2-Nitroaniline (ug/kg)	511	0	0						3 U	6800 U	81.1	8.4 U	250 U
3,3'-Dichlorobenzidine (ug/kg)	503	0	0						4.1 U	9300 U	113	12 UJ	340 U
3-Nitroaniline (ug/kg)	511	0	0						2.9 U	6500 U	77.9	8.1 U	240 U
4-Bromophenyl phenyl ether (ug/kg)	511	0	0						1.6 U	3500 U	42.4	4.4 U	130 U
4-Chloroaniline (ug/kg)	511	3	0.587	2.9 J	10 J	5.83	4.6 J	4.6 J	2.3 U	5300 U	63.2	6.5 U	200 U
4-Chlorophenyl phenyl ether (ug/kg)	511	0	0						2.2 U	5000 U	60	6.2 U	190 U
4-Nitroaniline (ug/kg)	511	1	0.196	30	30	30	30	30	3.7 U	8500 U	102	11 U	320 U
Aniline (ug/kg)	452	13	2.88	2.6 J	170 J	24.8	8.3 J	54	1.7 UJ	3800 U	50.3	4.9 U	150 U
Benzoic acid (ug/kg)	505	7	1.39	130 JT	1400 J	351	190 J	200	110 U	240000 U	2910	300 U	8800 U
Benzyl alcohol (ug/kg)	511	22	4.31	5.6 J	3700	194	10	110	4.1 U	9300 U	119	12 U	350 U
Bis(2-chloroethoxy) methane (ug/kg)	511	0	0						1.5 U	3300 U	39.2	4.1 U	120 U
Bis(2-chloroethyl) ether (ug/kg)	511	0	0						2.7 U	6000 U	72	7.4 U	220 U
Carbazole (ug/kg)	511	306	59.9	1.8 JT	520000	6580	19 J	8300	1.5 U	520000	3940	9.4 J	4200
Dibenzofuran (ug/kg)	511	462	90.4	0.22 J	230000	2210	12	4000	0.19 U	230000	2000	8.9	3200
Hexachlorobenzene (ug/kg)	511	136	26.6	0.066 J	134 JT	5.65	1.29 J	18.4 J	0.0162 U	2100 U	24.1	2.9 UT	67 U
Hexachlorobutadiene (ug/kg)	511	32	6.26	0.081 J	108 J	16.1	1.6 J	88.5 T	0.0297 U	1400 U	6.57	0.214 U	8.4 U
Hexachlorocyclopentadiene (ug/kg)	506	0	0						17 U	38000 U	455	47 U	1400 U
Hexachloroethane (ug/kg)	511	26	5.09	0.207	261 J	28.3	5.99 J	67.4 J	0.0439 UJ	2200 U	12.6	0.318 UJ	14.6 J
Isophorone (ug/kg)	511	0	0						1.8 U	4000 U	47.9	5 U	150 U
Nitrobenzene (ug/kg)	511	0	0						2.2 U	5000 U	60	6.2 U	190 U

Table 4-3. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples.

Analyte	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Maximum	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th
N-Nitrosodimethylamine (ug/kg)	510	0	0						6.7 U	16000 U	185	19 U	560 U
N-Nitrosodipropylamine (ug/kg)	511	0	0						3.5 U	8000 U	95.9	9.9 U	300 U
N-Nitrosodiphenylamine (ug/kg)	511	49	9.59	4.1 J	560 J	71.8	25	230	2.4 U	5500 U	71.7	7.3 UJ	220 U
Bis(2-chloroisopropyl) ether (ug/kg)	511	0	0						1.4 U	3000 U	35.9	3.7 U	110 U
Phenols (ug/kg)													
2,3,4,6;2,3,5,6-Tetrachlorophenol coelution (ug/kg)	511	43	8.41	0.76 J	1000	55.3	2.4 J	52	0.4 U	1000	5.89	0.61 U	6.5 U
2,4,5-Trichlorophenol (ug/kg)	511	23	4.5	0.48 J	200 J	16.1	4.2 J	25	0.32 U	200 J	2.75	0.5 U	7.6 U
2,4,6-Trichlorophenol (ug/kg)	511	56	11	0.76 J	450 J	26.5	3.1 J	70	0.4 U	450 J	4.9	0.61 U	17 U
2,4-Dichlorophenol (ug/kg)	510	13	2.55	7.1	64	28.9	21	63	2 U	4500 U	54.6	5.7 U	170 U
2,4-Dimethylphenol (ug/kg)	360	0	0						6 U	14000 U	215	19 U	550 U
2,4-Dinitrophenol (ug/kg)	510	0	0						40 U	90000 U	1080	120 U	3300 U
2-Chlorophenol (ug/kg)	511	7	1.37	5.55 JT	20 JT	13.5	13 J	19 JT	1.9 U	4300 U	51.2	5.3 U	160 U
2-Methylphenol (ug/kg)	511	3	0.587	6.4 J	12 JT	9.47	10	10	3.7 U	8500 U	102	11 U	320 UJ
2-Nitrophenol (ug/kg)	511	0	0						2.9 U	6500 U	77.9	8.1 U	240 U
4,6-Dinitro-2-methylphenol (ug/kg)	510	0	0						1.9 U	4300 U	51.1	5.3 U	160 U
4-Chloro-3-methylphenol (ug/kg)	511	7	1.37	4.4 J	32 J	11.7	6.8 J	18 JT	2.3 U	5300 U	63.5	6.7 U	200 U
4-Methylphenol (ug/kg)	511	275	53.8	3.6 J	800	65.4	34 J	210	3.2 U	7300 U	113	25	290 U
4-Nitrophenol (ug/kg)	511	0	0						0.793 U	75000 U	845	54 U	2800 U
Pentachlorophenol (ug/kg)	511	169	33.1	1 JT	5600	56.3	5.1 J	51	0.43 U	5600	19.7	0.76 U	16 J
Phenol (ug/kg)	511	145	28.4	2.4 J	220 J	20.6	8.5 J	91 J	2.3 U	4800 U	62.5	11 U	190 U
2,3,4,5-Tetrachlorophenol (ug/kg)	511	41	8.02	0.91 J	1100 J	61	3.9 J	70 J	0.63 U	1100 J	6.81	0.97 U	9.2 U
Phthalates (ug/kg)													
Dimethyl phthalate (ug/kg)	511	11	2.15	2.9 J	5100 J	584	24	790	2 U	5100 J	62.9	5.6 U	180 U
Diethyl phthalate (ug/kg)	511	8	1.57	14	420	135	36	410	3.8 U	8800 U	107	11 U	340 U
Dibutyl phthalate (ug/kg)	511	145	28.4	3.4 J	3200 J	75.1	7.2 J	230	3.1 U	6500 U	84.4	8.9 U	260 U
Butylbenzyl phthalate (ug/kg)	511	74	14.5	2.4 J	310	28.3	9.4	160	1.7 U	3800 U	48.7	5.2 J	150 U
Di-n-octyl phthalate (ug/kg)	511	9	1.76	4.7 J	170	61.7	56.5 JT	150	1.4 U	3000 U	37.1	3.8 U	120 U
Bis(2-ethylhexyl) phthalate (ug/kg)	511	148	29	4.9 J	10000	493	93	1700	2.1 U	10000	236	42	850
Polycyclic Aromatic Hydrocarbons (ug/kg)													
2-Methylnaphthalene (ug/kg)	511	479	93.7	0.4 J	3800000	24100	23	21000 J	0.4 J	3800000	22600	18	14000
Acenaphthene (ug/kg)	511	472	92.4	0.19 J	3900000	24000	42	34000 J	0.18 U	3900000	22200	33	28000
Acenaphthylene (ug/kg)	511	467	91.4	0.33 J	1500000 J	8050	21	2900	0.24 U	1500000 J	7370	17	2600
Anthracene (ug/kg)	511	474	92.8	0.34 J	1300000	13000	48	24000	0.24 U	1300000	12100	39 J	23000 J
Fluorene (ug/kg)	511	470	92	0.29 J	1500000	12900	35	20000	0.21 U	1500000	11900	28	17000
Naphthalene (ug/kg)	555	391	70.5	0.5 J	20000000	197000	94	52000	0.4 U	20000000	139000	39	21000
Phenanthrene (ug/kg)	511	497	97.3	0.41 J	8500000	67900	200	120000	0.37 U	8500000	66100	190	100000
Low Molecular Weight PAH (ug/kg)	511	504	98.6	0.45 JT	39900000 T	291000	407 T	225000 T	0.45 JT	39900000 T	287000	399 T	225000 T
Dibenz(a,h)anthracene (ug/kg)	511	459	89.8	0.4 J	67000	950	19 T	2300 J	0.29 U	67000	853	15	2100
Benz(a)anthracene (ug/kg)	511	489	95.7	0.3 J	760000	8440	100	21000	0.18 U	760000	8080	91	21000
Benzo(a)pyrene (ug/kg)	511	482	94.3	0.34 J	940000	10400	120	25000	0.25 U	940000	9770	105 T	24000
Benzo(b)fluoranthene (ug/kg)	511	472	92.4	0.72 J	590000 J	8090	130	17000	0.53 U	590000 J	7470	100	17000 J
Benzo(g,h,i)perylene (ug/kg)	511	486	95.1	0.33 J	730000	7740	100	21000 J	0.26 U	730000	7360	92	20000
Benzo(k)fluoranthene (ug/kg)	511	462	90.4	0.48 J	540000	4710	64	11000	0.36 U	540000	4260	49	9400 J
Chrysene (ug/kg)	511	476	93.2	0.51 J	980000	10700	150	26000	0.45 U	980000	9980	130	23000
Fluoranthene (ug/kg)	511	493	96.5	0.48 J	3500000	34900	250 J	74000	0.38 U	3500000	33600	230	72000
Indeno(1,2,3-cd)pyrene (ug/kg)	511	482	94.3	0.29 J	610000	7020	93	18000 J	0.27 U	610000	6620	81	18000
Pyrene (ug/kg)	511	491	96.1	0.51 J	4700000	43400	290	90000	0.4 U	4700000	41700	270	86000
High Molecular Weight PAH (ug/kg)	511	498	97.5	0.48 JT	13400000 T	133000	1290 T	289000 T	0.48 JT	13400000 T	130000	1220 T	289000 T
Polycyclic Aromatic Hydrocarbons (ug/kg)	511	504	98.6	0.54 JT	53300000 T	422000	1780 T	525000 T	0.54 JT	53300000 T	416000	1760 T	525000 T
Herbicides (ug/kg)													
Dalapon (ug/kg)	140	0	0						0.586 U	1.15 U	0.771	0.754 U	0.972 U
Dicamba (ug/kg)	140	0	0						2.1 U	4.11 U	2.77	2.71 U	3.49 U
MCPA (ug/kg)	140	3	2.14	1.58	144	52.6	12.1 J	12.1 J	1.42 U	144	2.96	1.83 U	2.36 U
Dichloroprop (ug/kg)	140	0	0						1.07 U	2.08 U	1.4	1.37 U	1.77 U

Table 4-3. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples.

Analyte	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Maximum	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th
2,4-D (ug/kg)	140	5	3.57	7.14	473	128	45.5 J	81.4 J	0.667 U	473	5.43	0.863 U	1.2 U
Silvex (ug/kg)	140	1	0.714	2.25 J	2.25 J	2.25	2.25 J	2.25 J	0.978 U	2.25 J	1.29	1.26 U	1.62 U
2,4,5-T (ug/kg)	140	0	0						0.975 U	1.9 U	1.28	1.25 U	1.62 U
2,4-DB (ug/kg)	140	1	0.714	797	797	797	797	797	0.986 U	797	6.98	1.27 U	1.64 U
Dinoseb (ug/kg)	140	0	0						1.35 U	2.63 U	1.77	1.73 U	2.24 U
MCPP (ug/kg)	140	2	1.43	1.62	37.2	19.4	1.62	1.62	1.3 U	37.2	1.96	1.67 U	2.15 U
Dioxins/Furans (pg/g)													
Tetrachlorodibenzo-p-dioxin homologs (pg/g)	119	101	84.9	0.015	185.67	3.9	0.485	6.22 T	0.003 U	185.67	3.31	0.297 T	6.22 T
Pentachlorodibenzo-p-dioxin homologs (pg/g)	119	87	73.1	0.016	125.19	4.17	1.398	8.591	0.003 U	125.19	3.05	0.531	8.104
Hexachlorodibenzo-p-dioxin homologs (pg/g)	119	116	97.5	0.02	348.007	14.1	4.335	42.447	0.014 U	348.007	13.8	4.051	42.447
Heptachlorodibenzo-p-dioxin homologs (pg/g)	119	117	98.3	0.12	1367.613	82.8	27.901	263.366	0.041 U	1367.613	81.5	26.8 T	263.366
Octachlorodibenzo-p-dioxin (pg/g)	119	86	72.3	0.499 J	1763.25 J	406	209.867	1423.863 J	0.365 U	1763.25 J	295	91.546 J	1396.829
Tetrachlorodibenzofuran homologs (pg/g)	119	96	80.7	0.021 T	3614.17	68.1	4.51	228.386	0.005 U	3614.17	55	2.389	150 T
Pentachlorodibenzofuran homologs (pg/g)	119	99	83.2	0.01	1625.977	55.8	8.484	185.536	0.003 U	1625.977	46.4	4.939	181.521
Hexachlorodibenzofuran homologs (pg/g)	119	107	89.9	0.014	860.812	46.6	11.834	175.377	0.007 U	860.812	41.9	7.773	175.377
Heptachlorodibenzofuran homologs (pg/g)	119	106	89.1	0.012	532.414	48.5	15.977	151.399	0.006 U	532.414	43.2	11.517	151.399
Octachlorodibenzofuran (pg/g)	119	80	67.2	0.014 J	351.1	41.4	16.691	129.224	0.008 U	351.1	28.4	8.009	113.805
2,3,7,8-Tetrachlorodibenzo-p-dioxin (pg/g)	119	35	29.4	0.035 J	42.212	1.96	0.257 T	2.08 T	0.002 U	42.212	0.601	0.035 J	0.849
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (pg/g)	119	59	49.6	0.023 J	58.293	1.52	0.209 J	1.461	0.003 U	58.293	0.772	0.056 J	0.947 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (pg/g)	119	60	50.4	0.017 J	3.872	0.36	0.205 J	0.956 J	0.003 U	3.91 U	0.246	0.068 J	0.851 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (pg/g)	119	86	72.3	0.008 J	30.998	2.19	1.161	5.152	0.004 U	30.998	1.6	0.607	5.086
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (pg/g)	119	80	67.2	0.013 J	8.931	0.963	0.441 J	2.646	0.004 UT	8.931	0.66	0.207 J	2.62
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (pg/g)	119	88	73.9	0.053 J	224.298	40.4	20.404	121.032	0.041 U	224.298	30	12.581	116.026
2,3,7,8-Tetrachlorodibenzofuran (pg/g)	119	61	51.3	0.095 J	203.81	18	1.256	64.669	0.005 UT	203.81	9.3	0.252	48.18
1,2,3,7,8-Pentachlorodibenzofuran (pg/g)	119	72	60.5	0.016 J	243.423	11.5	0.424 J	39.247	0.003 U	260.918 U	9.88	0.191 J	39.247
2,3,4,7,8-Pentachlorodibenzofuran (pg/g)	119	81	68.1	0.024 J	114.654	6.21	0.475 J	24.057	0.003 U	114.654	4.24	0.189 J	20.196
1,2,3,4,7,8-Hexachlorodibenzofuran (pg/g)	119	77	64.7	0.014 J	464.247	22.5	1.797	93.841	0.007 U	464.247	14.6	0.651 J	58.894
1,2,3,6,7,8-Hexachlorodibenzofuran (pg/g)	119	80	67.2	0.014 J	149.333	7.31	1.079 J	31.155	0.003 UT	149.333	4.92	0.424 J	19.823
1,2,3,7,8,9-Hexachlorodibenzofuran (pg/g)	119	26	21.8	0.011 JT	7.905	1.63	0.455 J	5.452 J	0.002 U	7.905	0.39	0.026 U	2.392
2,3,4,6,7,8-Hexachlorodibenzofuran (pg/g)	119	74	62.2	0.043 J	27.563	2.07	0.663 J	5.683	0.002 U	27.563	1.31	0.308 J	4.816
1,2,3,4,6,7,8-Heptachlorodibenzofuran (pg/g)	119	85	71.4	0.01 J	241.889	24.7	9.376	74.267	0.007 U	241.889	17.7	4.248	65.728
1,2,3,4,7,8,9-Heptachlorodibenzofuran (pg/g)	119	61	51.3	0.02 J	99.977	5.54	1.078	16.333	0.004 U	99.977	2.9	0.194 J	8.936
2,3,7,8-TCDD TEQ (pg/g)	119	107	89.9	0.00053 JT	200 T	8.46	1.11 JT	37 JT	0 UT	200 T	7.61	0.701 JT	37 JT
Volatile Organic Compounds (ug/kg)													
1,1,1,2-Tetrachloroethane (ug/kg)	270	0	0						0.036 U	7800 U	87.4	0.049 U	52 U
1,1,1-Trichloroethane (ug/kg)	270	0	0						0.068 U	7800 U	87.4	0.093 U	52 U
1,1,2,2-Tetrachloroethane (ug/kg)	270	13	4.81	0.18 J	8.7	2.12	0.73 J	7.3	0.11 U	9700 U	108	0.16 U	65 U
1,1,2-Trichloroethane (ug/kg)	270	0	0						0.068 U	7000 U	78.3	0.093 U	47 U
1,1-Dichloroethane (ug/kg)	270	11	4.07	0.095 JT	0.43 JT	0.27	0.31 J	0.37 J	0.065 U	6400 U	71.6	0.091 U	43 U
Vinylidene chloride (ug/kg)	270	0	0						0.094 U	8400 U	93.9	0.13 U	56 U
1,2,3-Trichloropropane (ug/kg)	270	5	1.85	0.38 J	3.7	1.53	0.88 J	1.9	0.13 U	15000 U	167	0.18 U	99 U
1,2-Dichloroethane (ug/kg)	270	5	1.85	0.055 J	0.22 J	0.141	0.15 J	0.17 J	0.036 U	8000 U	89.6	0.05 U	53 U
1,2-Dichloropropane (ug/kg)	270	0	0						0.04 U	8700 U	97.3	0.056 U	58 U
Methylethyl ketone (ug/kg)	163	163	100	1.5 J	31 J	4.87	3.8 J	11 J	1.5 J	31 J	4.87	3.8 J	11 J
2-Chloroethyl vinyl ether (ug/kg)	270	0	0						0.18 U	7900 UJ	88.4	0.24 U	53 U
Methyl N-butyl ketone (ug/kg)	244	1	0.41	6.2	6.2	6.2	6.2	6.2	0.73 U	6.2	1.05	0.99 U	1.3 U
Methyl isobutyl ketone (ug/kg)	245	3	1.22	0.36 JT	1.9	0.913	0.48 J	0.48 J	0.28 U	5000 U	20.8	0.37 U	0.47 U
Acetone (ug/kg)	250	48	19.2	3.6 J	110	32.2	28	55	2.1 U	35000 UJ	259	18 U	52
Acrolein (ug/kg)	19	3	15.8	0.84 J	1.4 J	1.03	0.86 J	0.86 J	0.63 U	1.4 J	0.881	0.89 U	1.1 U
Acrylonitrile (ug/kg)	268	0	0						0.27 U	12000 U	130	0.37 U	31 U
Benzene (ug/kg)	270	130	48.1	0.045 J	270000	6580	0.25 J	28000	0.045 J	270000	3170	0.1 J	740
Bromochloromethane (ug/kg)	270	0	0						0.069 U	8900 U	98.9	0.095 U	59 U
Bromodichloromethane (ug/kg)	270	0	0						0.078 U	6000 U	67	0.11 U	40 U
Bromoform (ug/kg)	270	0	0						0.053 U	20000 U	218	0.073 U	130 UJ

Table 4-3. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples.

Analyte	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Maximum	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th
Bromomethane (ug/kg)	270	0	0						0.43 U	16000 U	177	0.59 U	130 U
Carbon disulfide (ug/kg)	270	37	13.7	0.18 J	850	23.4	0.33 J	1.1	0.15 U	12000 U	131	0.22 U	140 U
Carbon tetrachloride (ug/kg)	270	0	0						0.12 UT	8600 U	96.6	0.16 U	58 U
Chlorobenzene (ug/kg)	270	35	13	0.18 J	6600	354	1.1	11	0.08 U	6600	119	0.12 U	80 U
Chlorodibromomethane (ug/kg)	270	0	0						0.078 U	5800 U	64.3	0.11 U	38 U
Chloroethane (ug/kg)	270	1	0.37	0.9	0.9	0.9	0.9	0.9	0.32 U	13000 U	139	0.45 U	81 U
Chloroform (ug/kg)	270	13	4.81	0.078 J	120 J	10	0.13 J	7.1	0.064 U	6700 U	75.7	0.09 U	80 U
Chloromethane (ug/kg)	270	1	0.37	0.86	0.86	0.86	0.86	0.86	0.22 U	9600 U	107	0.3 U	64 UJ
cis-1,3-Dichloropropene (ug/kg)	270	0	0						0.036 U	5700 U	63.5	0.049 U	38 U
Methylene bromide (ug/kg)	270	0	0						0.094 U	6900 U	77.1	0.13 U	46 U
Dichlorodifluoromethane (ug/kg)	270	0	0						0.13 U	12000 U	131	0.18 U	78 U
Ethylbenzene (ug/kg)	270	64	23.7	0.098 J	140000	8700	13	32000	0.081 U	140000	2060	0.12 U	2700
Methyl iodide (ug/kg)	270	1	0.37	7100 J	7100 J	7100	7100 J	7100 J	0.77 U	16000 UJ	185	1.1 UJ	180 U
Isopropylbenzene (ug/kg)	270	84	31.1	0.063 J	19000 J	761	4.5	3300 J	0.051 U	19000 J	237	0.079 U	620
m,p-Xylene (ug/kg)	270	57	21.1	0.21 J	200000	9560	9.5	47000	0.15 U	200000	2020	0.22 U	600 J
Methylene chloride (ug/kg)	270	14	5.19	0.88 J	290 J	25.8	1.6 J	37 J	0.38 U	14000 U	156	2.3 U	170 U
Methyl tert-butyl ether (ug/kg)	270	96	35.6	0.074 J	14	0.469	0.23 J	1.1	0.051 U	5200 U	58	0.083 J	35 U
o-Xylene (ug/kg)	270	72	26.7	0.11 J	80000	3490	3.7	15000	0.086 U	80000	931	0.14 U	780
Styrene (ug/kg)	270	3	1.11	0.15 J	22000	7830	1500 J	1500 J	0.085 U	22000	152	0.14 UT	65 U
Tetrachloroethene (ug/kg)	270	3	1.11	0.7 J	1	0.877	0.93	0.93	0.11 U	7700 U	85.8	0.16 U	51 U
Toluene (ug/kg)	270	40	14.8	0.22 J	190000	10500	3.6	39000	0.18 U	190000	1560	0.25 U	180 U
trans-1,2-Dichloroethene (ug/kg)	270	1	0.37	0.44 J	0.44 J	0.44	0.44 J	0.44 J	0.22 U	9800 U	109	0.3 U	65 U
trans-1,3-Dichloropropene (ug/kg)	270	0	0						0.051 U	6100 U	67.6	0.07 U	41 U
1,4-Dichloro-trans-2-butene (ug/kg)	264	0	0						0.59 U	42000 U	424	0.8 U	120 U
Trichloroethene (ug/kg)	270	103	38.1	0.11 J	1900000	21400	0.51 J	1.5	0.076 U	1900000	8290	0.12 U	88 U
Trichlorofluoromethane (ug/kg)	270	0	0						0.093 U	9200 U	103	0.13 U	61 U
Vinyl acetate (ug/kg)	101	0	0						0.41 U	0.83 U	0.573	0.57 U	0.7 U
Vinyl chloride (ug/kg)	270	8	2.96	0.14 J	4000 J	501	0.24 J	2.8	0.097 U	15000 U	173	0.14 U	99 U
Ethylene dibromide (ug/kg)	270	0	0						0.059 U	5100 U	57.1	0.081 U	34 U
Xylene (ug/kg)	270	80	29.6	0.11 JT	280000 T	9960	3.53 JT	49000 T	0.11 JT	280000 T	2950	0.23 UT	2380 T
Petroleum													
Diesel Range Hydrocarbons (mg/kg)	348	302	86.8	9.9 JT	190000 J	2850	360 J	5000 J	9.4 U	190000 J	2480	280 J	4900 J
Gasoline Range Hydrocarbons (mg/kg)	429	139	32.4	1.5 T	21000 J	582	32 J	2400 J	1.2 U	21000 J	191	4 U	160 J
Residual Range Organics (mg/kg)	348	301	86.5	9.25 JT	110000 J	2170	750 J	5000 J	7 U	110000 J	1890	620 J	4500 J
Total Petroleum Hydrocarbons (mg/kg)	348	316	90.8	9.25 JT	321000 JT	5050	1090 JT	10500 JT	3.2 UT	321000 JT	4580	950 JT	9020 JT

Notes:

J - The associated numerical value is an estimated quantity.

N - Presumptive evidence of presence of material.

T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte).
Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
Beach Sediment Samples								
B001	LW2-B001	11.1	9.45	3.75	3.44	2.38	5.74	**35.9 T**
B002	LW2-B002	5.57	4.26	2.34	1.99	1.47	3.76	**19.4 T**
B003	LW2-B003	13.1 T	10.6 T	7.3 T	4.53 T	2.03 T	7.05 T	**44.6 T**
B004	LW2-B004	3.24	4.54	2.18	1.67	1.08	2.87	**15.6 T**
B005	LW2-B005	3.34	1.91	1.28	0.79	0.61	1.24	**9.17 T**
B006	LW2-B006	0.49	0.37	0.5	0.44	0.34	0.68	**2.82 T**
B007	LW2-B007	5 T	2.86 T	2.69 T	1.47 T	1.42 T	2.77 T	**16.2 T**
B008	LW2-B008	0.05	0	0.2	0	0.08	0	**0.33 T**
B009	LW2-B009	0.41	0.03	0.29	0.04	0.02	0.27	**1.06 T**
B010	LW2-B010	3.61	4.86	2.63	1.78	1.91	3.5	**18.3 T**
B011	LW2-B011	0.06	0	0.11	0.08	0	0.07	**0.32 T**
B012	LW2-B012	1.32	0.87	0.68	0.25	0.36	0.25	**3.73 T**
B015	LW2-B015	0.2	0.02	0.06	0.05	0	0.08	**0.41 T**
B016	LW2-B016	1.74	1.8	1.8	0.83	0.69	1.24	**8.1 T**
B017	LW2-B017	0.74	0.44	0.54	0.2	0.21	0.22	**2.35 T**
B018	LW2-B018	0.17	0.1	0.15	0	0.2	0	**0.62 T**
B019	LW2-B019	3.84	2.88	3.14	2.04	0.97	2.71	**15.6 T**
B020	LW2-B020	4.02	3.22	0	0.7	0.72	0.62	**9.28 T**
B021	LW2-B021	1.21	0.57	0.46	0.13	0.24	0.28	**2.89 T**
B022-1	LW2-B022-1	7.83	4.11	3.17	1.66	1.19	2.43	**20.4 T**
B022-2	LW2-B022-2	9.43	6.51	3.7	2.25	1.4	2.33	**25.6 T**
B023	LW2-B023	1.4	1.13	0.85	0.61	0.48	0.74	**5.21 T**
B024	LW2-B024	0.3	0.13	0.25	0.02	0.09	0	**0.79 T**
B025-1	LW2-B025-1	3.09 T	0.565 T	0.515 T	0.28 T	0.295 T	0.203 T	**4.95 T**
B025-2	LW2-B025-2	1.14	1.24	1.21	0.62	0.51		**4.72 JT**
B026	LW2-B026	12.7	19	6.21	3.34	2.3	5.95	**49.5 T**
B050	LW2-B050	1.11	1.74	1.95	1.56	1.01	1.82	**9.19 T**
Surface Interval Sediment Samples								
C060	LW2-C060-A	7.93 T	2.04 T	1.41 T	1.26 T	1 T	1.68 T	**15.3 T**
C066	LW2-C066-A	18.4	16.6	9.4	5.84	5.09	7.4	**62.7 T**
C093	LW2-C093-A	7.63	12.9	14.7	15.5	11.8	8.01	**70.5 T**
C144	LW2-C144-A	20.5	27	14.5	9.8	5.26	8.35	**85.4 T**
C221	LW2-C221-A	1.78	3.34	3.27	2.04	1.57	2.48	**14.5 T**
C255	LW2-C255-A	0.41	0.18	0	0.25	0.11	0.08	**1.03 T**
C291	LW2-C291-A	24	21.3	18.8	8.19	5.59	9.11	**87 T**
C342	LW2-C342-A	20.1	25	13.1	7.17	4.72	9.87	**80 T**
C397	LW2-C397-A	1.79	14.2	17	24.7	16.3	14.1	**88.1 T**
C400	LW2-C400-A	27.3	2.98	7.16	4.7	4.13	5.08	**51.4 T**
C420	LW2-C420-A	24.2	16.9	9.07	6.59	4.09	6.13	**67 T**
C471	LW2-C471-A	37.9	15.4	10	5.86	2.83	3.13	**75.1 T**
D1-1	LW2-D1-1	29.5 T	23.9 T	13.8 T	7.16 T	5.01 T	7.57 T	**86.9 T**
D1-2	LW2-D1-2	33	21.6	12.9	6.72	4.78	7.72	**86.7 T**
D2	LW2-D2	27.2	6.32	2.7	1.55	1.3	1.79	**40.9 T**
G001	LW2-G001	41.7	18.2	10.7	4.5	4.06	7.15	**86.3 T**
G002	LW2-G002	38.1	22.8	12.5	7.5	4.02	6.75	**91.7 T**
G003	LW2-G003	30.5 T	27.1 T	12.9 T	7.28 T	5.05 T	6.74 T	**89.6 T**
G004	LW2-G004	24.9	16.6	8.71	5.05	3.26	5.48	**64 T**
G005	LW2-G005	31.6	26.6	15.3	10.4	5.47	5.34	**94.7 T**
G006	LW2-G006	20.9	32.3	20.3	12	5.24	9.74	**100 T**
G007-1	LW2-G007-1	17 T	21.8 T	15.3 T	8.41 T	5.68 T	9.77 T	**78 T**
G007-2	LW2-G007-2	30.5	24.7	15	7.47	4.4	8.57	**90.6 T**
G008	LW2-G008	31.2	26.9	16.6	9.02	5.1	6.79	**95.6 T**
G009	LW2-G009	5.89	4.95	4.02	2.51	1.81	4.11	**23.3 T**
G010	LW2-G010	26.5	26.8	17.5	8.05	5.78	9.48	**94.1 T**
G011	LW2-G011	14.9	13.8	9.97	6.21	4.15	5.43	**54.5 T**
G012	LW2-G012	28.6	24.7	15.2	8.25	4.68	6.23	**87.7 T**
G013	LW2-G013	21.8	27.8	20.6	12	5.46	11.5	**99.2 T**
G014	LW2-G014	32	26.7	15.2	8.86	4.41	6.54	**93.7 T**
G015	LW2-G015	16.6 T	14.9 T	11.4 T	6.48 T	4.36 T	6.13 T	**59.9 T**
G016	LW2-G016	18.1 T	31.4 T	20.5 T	11.1 T	6.56 T	8.54 T	**96.2 T**
G017	LW2-G017	39.1	15.3	9.7	4.01	4.23	4.11	**76.5 T**
G018	LW2-G018	29	23.7	13.7	8.21	4.62	6.58	**85.8 T**
G019	LW2-G019	1.14	0.73	0.66	0.62	0.44	0.19	**3.78 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
G020	LW2-G020	40.6	15.6	10.5	6.14	3.61	5.44	**81.9 T**
G021	LW2-G021	22.3	27.7	17.3	9.74	6.07	7.64	**90.8 T**
G022	LW2-G022	35.4	23.1	13.7	7.3	5.03	5.3	**89.8 T**
G023-1	LW2-G023-1	21.7 T	8.38 T	4.7 T	2.68 T	1.71 T	3.57 T	**42.7 T**
G023-2	LW2-G023-2	25.8	12.9	7.22	4.3	3.43	5.9	**59.6 T**
G024	LW2-G024	44.4	16.2	10.1	5.9	3.96	5.7	**86.3 T**
G025	LW2-G025	0.21	0.12	0.17	0.15	0.01	0.03	**0.69 T**
G026	LW2-G026	35.4	21.1	14.3	8.96	5.15	5.86	**90.8 T**
G027	LW2-G027	0.86	2.45	2.01	1.39	0.87	0.87	**8.45 T**
G028	LW2-G028	25.5	14.5	10.8	8.19	4.43	7.73	**71.2 T**
G029	LW2-G029	29.8	24	6.36	5.15	3.6	5.37	**74.3 T**
G030	LW2-G030	23	31.7	15.2	7.53	7.29	8.5	**93.2 T**
G031	LW2-G031	30	11.9	7.81	5.08	3.28	5.5	**63.6 T**
G032	LW2-G032	23.2	27.7	17.4	12.1	5.13	6.56	**92.1 T**
G033	LW2-G033	12	12	8.07	5.43	3.26	3.9	**44.7 T**
G034	LW2-G034	1.82	3.25	2.98	2.26	1.08	0.8	**12.2 T**
G035	LW2-G035	44.6	11.1	5.79	3.83	1.96	3.36	**70.6 T**
G036	LW2-G036	31.4	22	12.7	7.28	3.88	4.55	**81.8 T**
G037	LW2-G037	2.14	1.42	0.52	0.46	0.38	0.43	**5.35 T**
G038	LW2-G038	1.48	2.89	2.38	1.91	1.42	1.58	**11.7 T**
G039	LW2-G039	22.9	26.4	15.8	10.3	5.48	7.87	**88.8 T**
G040	LW2-G040	2.03	2.14	1.19	0.56	0.65	0.44	**7.01 T**
G041	LW2-G041	16.6	17	9.7	5.24	3.68	5.04	**57.3 T**
G042	LW2-G042	20.4	21.2	13.6	8.62	5.01	7.27	**76.1 T**
G043	LW2-G043	27.4 T	22.9 T	13.3 T	8.72 T	4.72 T	7.62 T	**84.7 T**
G044-1	LW2-G044-1	30.4 T	19.1 T	12.2 T	8.31 T	5.49 T	7.57 T	**83.1 T**
G044-2	LW2-G044-2	34.4	18.9	11.7	7.43	4.45	6.72	**83.6 T**
G045	LW2-G045	0.263 T	0.413 T	0.237 T	0.513 T	0.37 T	0.213 T	**2.01 T**
G046	LW2-G046	34.7	17.8	11.6	8.07	4.42	5.82	**82.4 T**
G047	LW2-G047	1.05	0.8	0.6	0.78	0.57	0.46	**4.26 T**
G048	LW2-G048	0	0.21	0.43	0.31	0.23	0.23	**1.41 T**
G049	LW2-G049	0.25	0.34	0.39	0.38	0.38	0.17	**1.91 T**
G050	LW2-G050	22	9.06	6.14	5.2	3.3	3.47	**49.2 T**
G051	LW2-G051	19.9	20.9	14.4	8.93	5.46	6.14	**75.7 T**
G052	LW2-G052	1.68 T	1.32 T	1.28 T	0.833 T	0.827 T	1.2 T	**7.14 T**
G053	LW2-G053	0.3	0.38	0.33	0.28	0.18	0.05	**1.52 T**
G054	LW2-G054	6.49	3.37	2.69	2.05	1.58	2.46	**18.6 T**
G055	LW2-G055	15.9	12.2	9.24	6.2	2.74	4.81	**51.1 T**
G056	LW2-G056	7.32	6.23	3.81	3	1.55	1.59	**23.5 T**
G057	LW2-G057	23.4	9.05	5.44	4.53	3.55	4.56	**50.5 T**
G058	LW2-G058	12.1	8.67	5.81	3.45	1.5	2.33	**33.9 T**
G059	LW2-G059	0.29	0.57	0.58	0.53	0.35	0.13	**2.45 T**
G060	LW2-G060	8.3	3.3	1.79	0.99	1.18	1.47	**17 T**
G061	LW2-G061	16.7	12.9	9.43	5.33	3.1	5.52	**53 T**
G062	LW2-G062	7.64	1.85	1.1	0.78	0.35	0.79	**12.5 T**
G063	LW2-G063	39.5	11.6	7.23	5.04	4.05	5.18	**72.6 T**
G064	LW2-G064	11.3	3.65	2.31	1.4	1.38	1.43	**21.5 T**
G065	LW2-G065	31.4	8.73	4.72	3.5	2.7	3.59	**54.6 T**
G066	LW2-G066	26.9	13.3	8.3	4.46	3.24	5.46	**61.7 T**
G067	LW2-G067	19.5	13.2	8.33	5.14	2.78	4.81	**53.8 T**
G068	LW2-G068	40.7	8.33	5.43	3.77	2.41	2.99	**63.6 T**
G069	LW2-G069	11.5	12.8	9.44	6.35	3.05	4.56	**47.7 T**
G070	LW2-G070	22.4	19.4	11.1	6.38	4.03	7.98	**71.3 T**
G071	LW2-G071	10.8	6.78	2.91	2.19	1.52	3.25	**27.5 T**
G072	LW2-G072	35.2	19.3	10.1	6.7	5.53	4.87	**81.7 T**
G073	LW2-G073	0.92	0.86	0.87	0.61	0.46	0.49	**4.21 T**
G074	LW2-G074	1.13	1.24	1.15	0.84	0.84	0.84	**6.04 T**
G075-1	LW2-G075-1	9.21	6.15	4.38	2.42	2.02	2.54	**26.7 T**
G075-2	LW2-G075-2	15.5	7.53	4.32	2.96	2.37	3.49	**36.2 T**
G076	LW2-G076	24.5	17.7	9.94	6.46	4.5	6.53	**69.6 T**
G077	LW2-G077	44 T	20 T	11.4 T	5.76 T	3.57 T	6.34 T	**91.1 T**
G078	LW2-G078	2.32	2.15	2.48	1.69	0.92	1.89	**11.5 T**
G079	LW2-G079	9.68	5.95	6.26	6.16	3.91	13.1	**45.1 T**
G080	LW2-G080	0.67	0.5	0.37	0.46	0.3	0.57	**2.87 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
G081	LW2-G081	23.9	19	11.7	8	3.83	6.63	**73.1 T**
G082	LW2-G082	2.38	3.1	3	2.15	1.54	1.8	**14 T**
G083	LW2-G083	17.4	7.54	4.26	2.7	1.36	2.33	**35.6 T**
G084	LW2-G084	12.7	6.88	4.64	3.7	3.2	3.24	**34.4 T**
G085	LW2-G085	14.6 T	17.8 T	19.4 JT	13.2 T	3.97 T	4.86 T	**73.8 JT**
G086	LW2-G086	24	5.89	4.7	2.71	0.94	1.76	**40 T**
G087	LW2-G087	20	6.5	4.59	2.14	0.88	1.49	**35.6 T**
G088	LW2-G088	17.5 T	11.8 T	8.72 T	5.93 T	3.87 T	4.02 T	**51.8 T**
G089	LW2-G089	0.74	0.44	0.22	0.56	0.18	0.46	**2.6 T**
G090	LW2-G090	23.9	12	8.2	7.45	3.8	3.23	**58.6 T**
G091	LW2-G091	19.1	15.7	12	6.26	5.7	2.51	**61.3 T**
G092	LW2-G092	2.22	48.2	3.13	1.39	0.73	0.63	**56.3 T**
G093	LW2-G093	13.8	14.6	0.42	6.77	4.45	10	**50 T**
G094	LW2-G094	11.9	5.01	3.41	2.72	1.86	3.64	**28.5 T**
G095	LW2-G095	8.53 JT	5.77 T	1.58 T	1.74 T	1.16 T	2.19 T	**21 JT**
G096	LW2-G096	4.43	5.38	4.72	2.84	1.59	2.65	**21.6 T**
G097	LW2-G097	19.6	15.9	9.4	6.48	4.51	6.97	**62.9 T**
G098	LW2-G098	23.4	15.4	10.5	6.26	3.12	5	**63.7 T**
G099	LW2-G099	29.3	8.85	5.65	2.97	2.45	3.22	**52.4 T**
G100	LW2-G100	6.73	7.91	6.07	4.77	2.41	4.98	**32.9 T**
G101	LW2-G101	26.7	15.9	9.42	5.76	4.72	5.84	**68.3 T**
G102	LW2-G102	2.74	2.49	1.87	1.85	0.7	1.1	**10.8 T**
G103	LW2-G103	14.5	9.31	7.08	5.5	4.21	6.17	**46.8 T**
G104	LW2-G104	24.4	19.2	9.69	6.47	2.95	4.82	**67.5 T**
G105	LW2-G105	6.92	3.86	2.63	1.82	1.16	1.4	**17.8 T**
G106	LW2-G106	24.5	7.38	4.73	3.69	2.57	3.44	**46.3 T**
G107	LW2-G107	25.3	17	6.06	3.61	2.48	4.94	**59.4 T**
G108	LW2-G108	38.9	15.7	9.67	6.36	3.67	4.69	**79 T**
G109	LW2-G109	35.7	8.04	5.62	2.94	1.93	3.7	**57.9 T**
G110	LW2-G110	49.4	15	8.22	5.7	3.32	5.57	**87.2 T**
G111	LW2-G111	25.2	7.81	4.71	3.3	1.67	2.7	**45.4 T**
G112	LW2-G112	41.8	8.61	6.14	4.06	2.65	4.04	**67.3 T**
G113	LW2-G113	32.1	16.9	9.87	7.42	4.52	6.48	**77.3 T**
G114	LW2-G114	6.33 T	5.37 T	3.3 T	2.27 T	1 T	1.13 T	**19.4 T**
G115-1	LW2-G115-1	20 T	12.3 T	7.42 T	5 T	2.79 T	4.36 T	**51.9 T**
G115-2	LW2-G115-2	20.8	11.9	5.56	4.78	2.83	4.13	**50 T**
G116	LW2-G116	37.3	18.8	10.4	7.53	4.05	7.28	**85.4 T**
G117	LW2-G117	37.2	11.6	7.02	5.31	3.91	5.19	**70.2 T**
G118	LW2-G118	18.2	18.9	11	7.28	3.86	6.68	**65.9 T**
G119	LW2-G119	11.1	20.9	14.5	9.17	4.4	7.19	**67.3 T**
G120	LW2-G120	43.8	14.1	9.27	6.15	4.09	6	**83.4 T**
G121	LW2-G121	40.3	16.2	9.64	5.29	2.58	4.74	**78.8 T**
G122	LW2-G122	32.7	15.6	9.6	6.11	4.35	5.95	**74.3 T**
G123	LW2-G123	16.1	19.2	16.8	9.84	5.54	15	**82.5 T**
G124	LW2-G124	4.82	1.81	2.21	1.63	1.11	2.05	**13.6 T**
G125	LW2-G125	39.4	19.8	11.6	7.29	3.66	6.4	**88.2 T**
G126	LW2-G126	0.54	0.01	0.2	0.01	0.14	0	**0.9 T**
G127	LW2-G127	29.8 T	16.6 T	7.97 T	5.58 T	2.35 T	5.29 T	**67.6 T**
G128	LW2-G128	17.3	6.25	4.4	2.77	1.82	2.1	**34.6 T**
G129	LW2-G129	33.9 T	23 T	11 T	8.4 T	5.96 T	7.64 T	**89.9 T**
G130	LW2-G130	19.5	4.84	2.27	1.43	0.39	2.92	**31.4 T**
G131	LW2-G131	40.4	21.6	10.6	8.46	5.24	5.67	**92 T**
G132	LW2-G132	27.1	18.4	8.41	5.07	2.77	6.32	**68.1 T**
G133	LW2-G133	39.1	16.9	9.54	6.23	2.77	5.88	**80.4 T**
G134	LW2-G134	38.2	22.3	11.1	8.69	5.1	6.52	**91.9 T**
G135	LW2-G135	34.9	18.9	9.04	5.99	3.43	7.06	**79.3 T**
G136	LW2-G136	22.4	16.1	8.59	2.44	3.73	7.13	**60.4 T**
G137	LW2-G137	31.7	23.3	10.9	8.02	4.57	6.83	**85.3 T**
G138	LW2-G138	0.63	0.99	0.6	0.69	0.41	0.01	**3.33 T**
G139	LW2-G139	11.2	7.61	4.28	1.95	1.42	2.26	**28.7 T**
G140-1	LW2-G140-1	8.32 T	6.98 T	3.5 T	3.23 T	1.99 T	3.41 T	**27.4 T**
G140-1	LW2-G140-2	5.03	4.09	2.28	1.89	1.14	1.4	**15.9 JT**
G141	LW2-G141	18.3	12.6	6.38	4.14	2.06	2.56	**46 T**
G142	LW2-G142	21.5	4.57	2.14	1.2	0.99	1.32	**31.7 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
G143	LW2-G143	35	16.9	6.8	4.6	2.45	4.44	**70.2 T**
G144	LW2-G144	34.3	22.3	11.1	7.35	4.82	6.96	**86.8 T**
G145	LW2-G145	33.2	21.5	9.76	7.15	3.75	7.47	**82.8 T**
G146	LW2-G146	1.22 T	2.1 T	2.02 T	1.67 T	1.04 T	1.08 T	**9.13 T**
G147	LW2-G147	20.2	4.16	1.88	1.14	0.84	1.15	**29.4 T**
G148	LW2-G148	22.2 T	20.2 T	10.3 T	7.28 T	3.49 T	7.73 T	**71.2 T**
G149	LW2-G149	13.4	12.6	6.68	5.39	2.9	3.93	**44.9 T**
G150	LW2-G150	17	19.6	12	11.3	8.36	8.65	**76.9 T**
G152	LW2-G152	21.1	27.3	13.3	13.1	8.84	7.02	**90.7 T**
G153	LW2-G153	11.4	12.3	6.44	5.64	2.83	5.41	**44 T**
G154	LW2-G154	27.6	18.3	10.7	5.99	5.94	7.33	**75.9 T**
G155	LW2-G155	14.5	22	12.4	9.24	5.76	12.2	**76.1 T**
G156	LW2-G156	21.6	20.6	11.6	8.6	4.64	7.12	**74.2 T**
G157	LW2-G157	9.95	11.9	6.73	4.63	2.6	6.66	**42.5 T**
G158	LW2-G158	28.3	19.4	10.8	8.05	5.4	6.32	**78.3 T**
G159	LW2-G159	3.16	3.25	2.63	2.05	1.28	2.13	**14.5 T**
G160	LW2-G160	14.8	11.1	3.83	1.99	1.24	3.01	**36 T**
G161	LW2-G161	4.54	8.46	6.24	3.64	2.65	3.99	**29.5 T**
G162	LW2-G162	24.5	19.3	11.1	6.85	4.38	6.64	**72.8 T**
G163	LW2-G163	0.71	0.42	0.38	0.26	0.11	0.13	**2.01 T**
G164	LW2-G164	3.31	2.72	2.26	1.61	0.78	0.95	**11.6 T**
G165	LW2-G165	14.2	18.3	11.9	7.68	5.02	7.3	**64.4 T**
G166	LW2-G166	13.8	19.1	10.6	4.89	3.2	6.33	**57.9 T**
G168	LW2-G168	16.6	11.3	5.98	4.73	2.51	5.52	**46.6 T**
G169	LW2-G169	25.1	21.4	11.4	8.11	4.09	7.51	**77.6 T**
G170	LW2-G170	11.5	6.26	4.06	2.69	1.68	2.24	**28.4 T**
G171	LW2-G171	34.4	22.5	12.7	7.49	3.52	5.71	**86.3 T**
G172	LW2-G172	42.9	18.3	9.46	6.79	2.89	3.79	**84.1 T**
G173	LW2-G173	41.8	19.9	11.9	7.64	3.48	5.49	**90.2 T**
G174	LW2-G174	16.1	12.1	7.5	5.35	3.51	6.02	**50.6 T**
G175	LW2-G175	9.65	11.9	6.2	5.47	3.77	6.44	**43.4 T**
G176	LW2-G176	1.91	1.47	0.97	0.86	0.46	0.44	**6.11 T**
G177	LW2-G177	60.2	7.73	4.33	4.53	3.24	3.9	**83.9 T**
G178	LW2-G178	4.73	4.52	5.97	0.69	1.67	2.5	**20.1 T**
G179	LW2-G179	6.51	8.35	6.46	5.55	4.52	4.15	**35.5 T**
G180	LW2-G180	0.75	1.22	1.26	0.98	0.68	0.46	**5.35 T**
G181	LW2-G181	21.8	18.1	9.5	7.45	5.08	6.09	**68 T**
G182	LW2-G182	3.42 T	2.39 T	1.58 T	1.49 T	0.85 T	0.89 T	**10.6 T**
G183	LW2-G183	0.27	0.14	0.12	0.21	0.1	0.08	**0.92 T**
G184	LW2-G184	6.57	4.91	3.21	2.29	1.41	2.69	**21.1 T**
G185	LW2-G185	5.14	4.28	2.45	2.02	1.31	1.55	**16.8 T**
G186	LW2-G186	0.88	0.54	0.58	0.47	0.66	0.58	**3.71 T**
G187	LW2-G187	13.9	11.4	7.06	5.97	3.55	9.48	**51.4 T**
G188	LW2-G188	25.3	14.5	9.35	6.11	3.99	7.67	**66.9 T**
G189	LW2-G189	20.7	16.5	8.91	5.36	3.08	4.95	**59.5 T**
G190	LW2-G190	14.8	7.01	2.99	4.11	2.06	3.02	**34 T**
G191	LW2-G191	2.26	2.1	1.92	1.5	1.2	1.39	**10.4 T**
G192	LW2-G192	27	8.68	4.47	3.24	2.43	3.85	**49.7 T**
G193	LW2-G193	4.66	3.68	1.44	1.94	1.05	1.68	**14.5 T**
G194	LW2-G194	1.17	1.51	1.37	1.33	0.61	0.48	**6.47 T**
G195	LW2-G195	16.3	15.1	7.8	7.67	3.8	5.77	**56.4 T**
G196	LW2-G196	9.76 T	9.58 T	6.57 T	3.39 T	2.35 T	3.71 T	**35.4 T**
G197-1	LW2-G197-1	11.5	3.74	2.01	1.48	1.06	2.31	**22.1 T**
G197-2	LW2-G197-2	16.1	8.1	4.37	3.17	1.79	4.47	**38 T**
G198	LW2-G198	27.6	7.7	3.14	1.85	1.35	2.15	**43.8 T**
G199	LW2-G199	37.5	10.6	4.97	1.71	1.58	1.89	**58.3 T**
G200	LW2-G200	10.4	6.72	5.62	1.25	2.19	3.74	**29.9 T**
G202	LW2-G202	23.1	9.99	6.26	3.62	2.92	3.73	**49.6 T**
G203-1	LW2-G203-1	37.9 T	18.7 T	9.69 T	4.33 T	3.57 T	4.26 T	**78.5 T**
G203-2	LW2-G203-2	31.5	13.3	8.71	4.09	3.01	4.29	**64.9 T**
G204	LW2-G204	21.8	14.9	7.37	4.65	2.41	6.75	**57.9 T**
G205	LW2-G205	4.37	3.66	2.45	1.77	1.2	1.23	**14.7 T**
G206	LW2-G206	33.7 JT	9.12 T	4.49 T	3.19 T	2.34 T	4.26 T	**57.1 JT**
G207	LW2-G207	23.2	16	7.94	2.91	2.24	4.01	**56.3 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
G208	LW2-G208	3.64	4.29	3.27	2.27	1.63	2.43	**17.5 T**
G209	LW2-G209	10.8	1.76	1.17	0.86	0.6	0.93	**16.1 T**
G210	LW2-G210	17.2	16.1	12.7	7.83	3.75	9.49	**67.1 T**
G212-1	LW2-G212-1	9.64	12.3	13.1	8.9	3.63	8.39	**56 T**
G212-2	LW2-G212-2	10.8	14.6	12.2	7.69	3.76	8.74	**57.8 T**
G213	LW2-G213	11.8	8.73	5.85	3.82	1.89	4.54	**36.6 T**
G214-1	LW2-G214-1	20.1	11.5	7.84	3.95	2.59	4.49	**50.5 T**
G215	LW2-G215	12.3	5.79	3.41	3.09	1.73	2.43	**28.8 T**
G216	LW2-G216	0.26	0.63	0.64	0.68	0.47	0.17	**2.85 T**
G217	LW2-G217	0.33	0.6	0.45	0.49	0.25	0.16	**2.28 T**
G218	LW2-G218	6.59	2.28	1.14	1.11	1.13	1.24	**13.5 T**
G219	LW2-G219	1.9	1.29	1.5	1.01	1.06	1.26	**8.02 T**
G220	LW2-G220	6.6	10.9	8.61	5.83	3.6	4.83	**40.4 T**
G221	LW2-G221	3.79	5.83	4.69	3.26	1.73	2.61	**21.9 T**
G222	LW2-G222	7.03	6.78	4.23	3.6	2.12	2.36	**26.1 T**
G223	LW2-G223	9.39	12.6	8.98	6.83	4.07	5.84	**47.7 T**
G224	LW2-G224	9.42	8.27	4.91	4.42	2.32	2.77	**32.1 T**
G225	LW2-G225	0.85	2.48	2.29	1.72	0.69	0.66	**8.69 T**
G226	LW2-G226	32.2	14.1	7.14	3.64	2.36	5.36	**64.8 T**
G227	LW2-G227	1.15	0.78	0.44	0.54	0.33	0.25	**3.49 T**
G228	LW2-G228	24.2	14.3	7.07	4.61	2.76	5.02	**58 T**
G229	LW2-G229	17.1	14.4	8.74	6.24	3.92	5.93	**56.3 T**
G230	LW2-G230	21.8	12.4	6.97	4.67	3.06	5.23	**54.1 T**
G231	LW2-G231	9.88	3.45	2.48	1.54	1	1.48	**19.8 T**
G232	LW2-G232	15.3	5.38	3.16	2.22	1.55	2.88	**30.5 T**
G233	LW2-G233	6.42 T	5.36 T	3.99 T	3.21 T	1.42 T	2.01 T	**22.4 T**
G234	LW2-G234	0.98	0.73	0.63	0.49	0.46	0.54	**3.83 T**
G235	LW2-G235	0.08	0.22	0.16	0.02	0.09	0.05	**0.62 T**
G236	LW2-G236	7.56	3.73	2.21	1.68	0.97	0.81	**17 T**
G237	LW2-G237	26.5	18.1	10.5	6.81	4.3	6.45	**72.7 T**
G238	LW2-G238	18	11.5	7.78	7.12	4.63	7.77	**56.8 T**
G239	LW2-G239	15	7.96	5.01	3.67	1.99	2.68	**36.3 T**
G240	LW2-G240	31.3	15	6.15	4.43	2.7	4.33	**63.9 T**
G241	LW2-G241	18.5	13.8	8.07	4.77	3.02	5.65	**53.8 T**
G242	LW2-G242	24.4	16	6.2	4.08	2.68	3.99	**57.4 T**
G243	LW2-G243	12.6 T	14.1 T	7.92 T	5.8 T	3.1 T	3.88 T	**47.4 T**
G244	LW2-G244	18.2	5.6	2.71	2.2	1.75	2.12	**32.6 T**
G245	LW2-G245	19.5	17.6	8.64	5.4	2.98	6.94	**61.1 T**
G246	LW2-G246	37.5	19.1	9.4	6.04	4.15	7.1	**83.3 T**
G247	LW2-G247	15.7	6.44	3.05	1.99	1.02	1.79	**30 T**
G248	LW2-G248	2.89	5.46	2.67	1.25	0.89	0.29	**13.5 T**
G249	LW2-G249	1.75	2.12	1.55	1.33	0.59	0.64	**7.98 T**
G250-1	LW2-G250	6.68	1.9	0.92	0.87	0.69	0.98	**12 T**
G251-1	LW2-G251-1	22.6	15.9	8.29	5.78	3.2	6.67	**62.4 T**
G251-1	LW2-G251-2	27.6	18.4	9.69	6.15	4.32	7.32	**73.5 T**
G252	LW2-G252	5.07	6.16	3.99	2.58	1.25	1.4	**20.5 T**
G253	LW2-G253	0.77	1.38	1.25	1.53	0.85	0.59	**6.37 T**
G254	LW2-G254	3.73	3.14	1.63	1.29	1.21	1.6	**12.6 T**
G255	LW2-G255	4.1	4.33	3.3	2.75	1.47	1.34	**17.3 T**
G256	LW2-G256	2.72	3.68	3.44	2.48	1.03	1.19	**14.5 T**
G257	LW2-G257	1.15	3.11	0.89	1.03	0.41	0.67	**7.26 T**
G258	LW2-G258	0.79	1.08	0.95	1.06	0.78	0.59	**5.25 T**
G259	LW2-G259	17	15	7.95	5.34	3.09	6.54	**54.9 T**
G260	LW2-G260	0.78	0.62	0.46	0.58	0.25	0.06	**2.75 T**
G261	LW2-G261	0.51	0.85	0.88	0.97	0.55	0.43	**4.19 T**
G262	LW2-G262	1.64	2.5	2.37	2.05	1.1	0.96	**10.6 T**
G263	LW2-G263	16.4	12.3	7.75	7.02	2.26	1.68	**47.4 T**
G264	LW2-G264	16.7	18.2	12.1	7.74	4.55	10.1	**69.4 T**
G265	LW2-G265	0.73	1.3	1.48	1.68	0.77	0.46	**6.42 T**
G266	LW2-G266	3.71	4.23	3.71	2.73	1.91	2.17	**18.5 T**
G267	LW2-G267	28.2	12.8	7.3	4.26	2.51	5.78	**60.9 T**
G268	LW2-G268	13.8	8.74	6.22	4.84	3.1	3.8	**40.5 T**
G269	LW2-G269	13.9 T	22.9 T	15.7 T	13.4 T	9.64 T	7.92 T	**83.5 T**
G270-1	LW2-G270-1	15.2	16.9	11	7.03	3.65	7.24	**61 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
G270-2	LW2-G270-2	19.4	22.2	12.3	8.2	4.01	6.13	**72.2 T**
G271	LW2-G271	0.38	0.41	0.53	0.58	0.32	0.25	**2.47 T**
G272	LW2-G272	4.28	7.55	5.94	4.05	1.63	2.28	**25.7 T**
G273	LW2-G273	18.2 T	15.2 T	10.8 T	5.74 T	4.71 T	6.38 T	**61 T**
G274	LW2-G274	2.38	1.54	1.12	1.11	1.18	0.7	**8.03 T**
G275-1	LW2-G275-1	17.2	12.4	7.08	5.95	3.95	5.06	**51.6 T**
G275-2	LW2-G275-2	19.3	14.5	8.92	5.87	3.83	6.25	**58.7 T**
G276	LW2-G276	21.4	27.1	16.1	7.27	5.83	10.4	**88.1 T**
G277	LW2-G277	22.2	15.1	7.55	4.83	2.71	5.64	**58 T**
G278	LW2-G278	32.2	17.4	10.9	5.5	3.57	6.68	**76.3 T**
G280	LW2-G280	23.6	18.9	9.71	5.96	3.6	7.1	**68.9 T**
G281	LW2-G281	0.74	0.89	0.96	0.83	0.56	0.81	**4.79 T**
G282	LW2-G282	8.62	9.97	6.34	3.41	1.71	1.79	**31.8 T**
G283	LW2-G283	24.4	13	5.93	3.65	1.8	5.07	**53.9 T**
G284	LW2-G284	15.3	25.7	16.2	9.74	5.82	10.7	**83.5 T**
G285	LW2-G285	0.37	0.61	0.57	0.53	0.57	0.43	**3.08 T**
G287	LW2-G287	2.76 T	5.81 T	5.26 T	3.59 T	1.73 T	2.79 T	**21.9 T**
G288	LW2-G288	11.5	19.9	16.1	12.6	7.77	9.9	**77.8 T**
G289	LW2-G289	21.1	23.5	15.2	9.85	5.14	11.6	**86.4 T**
G290	LW2-G290	7.18	6.81	4.83	3.15	2.21	2.44	**26.6 T**
G291	LW2-G291	35.9 T	21.9 T	14.9 T	9.13 T	4.85 T	7.59 T	**94.3 T**
G292	LW2-G292	13.8	9.83	5.86	4.15	2.45	4.81	**40.9 T**
G293	LW2-G293	23.8	16.3	11.8	6.89	4.7	7.37	**70.9 T**
G294-1	LW2-G294-1	13.7 T	19.4 T	15.7 T	10.4 T	4.91 T	9.86 T	**74 T**
G294-2	LW2-G294-2	16.9 T	17.1 T	12.7 T	8.09 T	4.43 T	7.57 T	**66.8 T**
G295	LW2-G295	27.1 T	20.2 T	10.9 T	6.42 T	3.53 T	6.82 T	**75 T**
G296	LW2-G296	31.9	20.8	12.1	6.49	3.71	6.01	**81 T**
G297	LW2-G297	10.9	16.4	10.9	8	5.03	6.62	**57.9 T**
G298	LW2-G298	10.9	14.2	13.7	8.29	3.84	5.05	**56 T**
G299	LW2-G299	10.8	16.9	10.5	6.69	5.44	7.49	**57.8 T**
G300	LW2-G300	0.59	0.69	0.63	0.64	0.42	0.41	**3.38 T**
G301	LW2-G301	20	10.2	4.67	2.99	2.1	2.97	**42.9 T**
G302	LW2-G302	11.9	16.8	11.4	8.66	4.11	8.89	**61.8 T**
G303	LW2-G303	26.3 T	15.5 T	8.17 T	5.03 T	3.52 T	5.93 T	**64.5 T**
G305	LW2-G305	13.9	20	14.3	9.04	7.24	8.56	**73 T**
G306	LW2-G306	4.16	4.39	4.6	2.82	1.13	1.43	**18.5 T**
G307	LW2-G307	24.4	21	12.5	6.39	4.91	6.44	**75.6 T**
G308	LW2-G308	10.2	9.95	5.27	3.66	2.06	2.98	**34.1 T**
G309	LW2-G309	18.9	21.2	14	7.77	4.86	8.92	**75.7 T**
G310	LW2-G310	15.4 T	27.6 T	23.7 T	13.8 T	7.78 T	7.68 T	**96 T**
G311-1	LW2-G311-1	21 T	16 T	18 T	11.9 T	7.96 T	14.6 T	**89.5 T**
G311-2	LW2-G311-2	10.5	14.5	6.94	4.55	2.81	4.4	**43.7 T**
G313	LW2-G313	13.7	23.8	16.3	8.71	4.48	8.43	**75.4 T**
G314	LW2-G314	27.6	18.2	12.1	7.77	3.93	6.74	**76.3 T**
G315	LW2-G315	13.5	11.7	6.03	4.9	3.14	4.82	**44.1 T**
G316	LW2-G316	0.73	0.29	0.14	0.19	0.06	0.02	**1.43 T**
G317	LW2-G317	10.8	9.82	6.09	3.76	1.68	2.23	**34.4 T**
G318	LW2-G318	11.3	6.2	3.97	2.24	0.94	1.05	**25.7 T**
G319	LW2-G319	1.26	1.23	1.26	0.96	0.75	0.75	**6.21 T**
G320	LW2-G320	12	7.5	3.89	2.69	1.25	1.76	**29.1 T**
G321	LW2-G321	17.1	8.96	4.68	2.97	1.06	3.34	**38.1 T**
G322	LW2-G322	16	12.4	9.67	5.43	2.35	2.63	**48.5 T**
G323	LW2-G323	4.81	2.02	1.03	0.72	0.47	0.52	**9.57 T**
G324-1	LW2-G324-1	0.57	0.64	0.47	0.49	0.39	0.59	**3.15 T**
G324-2	LW2-G324-2	2.09	1.75	1.2	1.23	0.76	0.51	**7.54 T**
G325	LW2-G325	10.6	7.41	5.36	3.32	1.68	1.78	**30.2 T**
G326	LW2-G326	11.1	11.4	8.86	5.14	3.31	7.04	**46.9 T**
G327	LW2-G327	15.4	7.67	3.89	2.79	1.5	2.35	**33.6 T**
G328	LW2-G328	1.3	1.27	1.21	1.03	0.63	0.64	**6.08 T**
G329	LW2-G329	2.26	2.79	1.56	1.48	0.83	0.8	**9.72 T**
G330	LW2-G330	8.88	38.9	12	7.46	2.59	4.26	**74.1 T**
G331	LW2-G331	1.13	0.49	0.31	0.23	0.22	0.11	**2.49 T**
G332	LW2-G332	22.2	19	13.4	14	8.73	4.38	**81.7 T**
G333	LW2-G333	12.9	5.53	3.52	2.71	1.08	1.62	**27.4 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
G334	LW2-G334	25.7	15.3	8.49	4.79	2.57	3.72	**60.6 T**
G335	LW2-G335	4.62	2.29	0.84	0.68	0.29	0.5	**9.22 T**
G336	LW2-G336	10.6	4.75	2.41	1.97	0.86	1.01	**21.6 T**
G337	LW2-G337	35.7	17	9.02	5.53	3.45	4.9	**75.6 T**
G338	LW2-G338	33.8	21	9.78	6.11	2.93	5.97	**79.6 T**
G339	LW2-G339	32.1	20	9.06	4.67	2.98	4.95	**73.8 T**
G340	LW2-G340	20	11.7	5.32	4.75	2.23	3.57	**47.6 T**
G341	LW2-G341	37.8	18	10.2	5.66	2.65	4.82	**79.1 T**
G342	LW2-G342	31.9	21.2	9.99	5.35	3.45	4.92	**76.8 T**
G343	LW2-G343	35.6	15.8	8.13	5.84	2.84	4.78	**73 T**
G344	LW2-G344	40.2	19.5	10.9	6.38	3.6	6.99	**87.6 T**
G345-1	LW2-G345-1	36.9 T	21.9 T	9.83 T	5.67 T	3.39 T	5.08 T	**82.8 T**
G345-2	LW2-G345-2	36.4	21.3	8.78	5.35	2.85	4.46	**79.1 T**
G346	LW2-G346	24.2	23.6	13.1	4.97	3.62	5.39	**74.9 T**
G347	LW2-G347	27.2	22	11	6.64	3.73	5.62	**76.2 T**
G348	LW2-G348	26	11.9	4.13	2.33	1.37	2.64	**48.4 T**
G349	LW2-G349	17.8	20.1	15.5	16.5	10.9	8.38	**89.2 T**
G350	LW2-G350	31.9	12.2	7.69	5.21	2.2	3.78	**63 T**
G351	LW2-G351	29 T	20.4 T	9.67 T	5.99 T	2.97 T	5.15 T	**73.2 T**
G351-2	LW2-G351-2	32 T	16.1 T	9.18 T	4.18 T	2.5 T	3.96 T	**67.9 T**
G352	LW2-G352	21.5	13.5	6.02	4.63	2.77	4.77	**53.2 T**
G353-1	LW2-G353-1	8.69	38.4	11.6	6.44	4.14	6.77	**76 T**
G353-2	LW2-G353-2	9.44	38.2	10.8	5.91	3.58	6.08	**74 T**
G354	LW2-G354	35.8 T	16.7 T	9.02 T	5.61 T	3.93 T	7.56 T	**78.6 T**
G355	LW2-G355	9.32	3.63	2.15	1.52	0.796	1.54	**19 T**
G356	LW2-G356	55.9	16.7	9.21	3.35	2.17	3.37	**90.7 T**
G357	LW2-G357	16.1	8.78	4.73	3.01	1.78	4.46	**38.9 T**
G358	LW2-G358	42.2	18.4	12.3	5.54	3.36	7.09	**88.9 T**
G359	LW2-G359	51	18	9.43	3.94	2.24	5.11	**89.7 T**
G360	LW2-G360	18.9	19.9	10.1	5.28	3.35	5.34	**62.9 T**
G361	LW2-G361	39.7	15.9	10.9	5.57	2.99	5.13	**80.2 T**
G362-1	LW2-G362-1	41.5 T	23.7 T	10.4 T	4.29 T	2.11 T	5.22 T	**87.2 T**
G362-2	LW2-G362-2	42.8	25.5	11.3	5.12	2.16	5.67	**92.6 T**
G363	LW2-G363	31.3 T	19.1 T	3.89 T	10.4 T	2.76 T	4.96 T	**72.4 T**
G364	LW2-G364	29.7	14.6	13.2	4.7	2.7	4.81	**69.7 T**
G365	LW2-G365	11.1	11.1	8.8	6.76	4.3	8.77	**50.8 T**
G366	LW2-G366	23.6	21.5	12.8	6.78	3.68	13.9	**82.3 T**
G367	LW2-G367	4.77	2.91	2.71	2.42	1.81	3.23	**17.9 T**
G368	LW2-G368	19.4	28	17.3	6.81	3.98	12	**87.5 T**
G369	LW2-G369	57.8	12	6.34	4.03	2.71	2.75	**85.6 T**
G370	LW2-G370	19.5 T	17.2 T	12.1 T	8.28 T	4.91 T	7.79 T	**69.8 T**
G371	LW2-G371	44.6	8.46	2.54	1.86	0.78	4.28	**62.5 T**
G372-1	LW2-G372-1	14.1 JT	22.2 T	18.9 T	14.3 T	7.3 T	10.8 T	**87.6 JT**
G372-2	LW2-G372-2	13.8	23	19.9	15.5	7.76	10.9	**90.9 T**
G373	LW2-G373	10.6	41.1	9.4	6.37	3.23	4.19	**74.9 T**
G374	LW2-G374	41.2	17.7	9.76	4.52	3.3	6.77	**83.3 T**
G375	LW2-G375	25.2	28.7	14.3	8.08	5.25	9.98	**91.5 T**
G376	LW2-G376	11.7	22.5	19.2	11.6	6.26	12.7	**84 T**
G377	LW2-G377	3.41	1.66	0.76	0.64	0.42	1.01	**7.9 T**
G378	LW2-G378	26.3	17.8	10.3	5.53	4.1	4.73	**68.8 T**
G379	LW2-G379	8.19	19.1	21.8	13.8	11.8	15.6	**90.3 T**
G380	LW2-G380	1.53	1.05	0.68	1.18	0.78	0.72	**5.94 T**
G381	LW2-G381	12.6	24	17	12.6	9.37	8.7	**84.3 T**
G382	LW2-G382	15.1	20.1	15.3	11.4	6.83	8.01	**76.7 T**
G383	LW2-G383	0.54	0.47	0.44	0.3	0.29	0.01	**2.05 T**
G384-1	LW2-G384-1	3.02 T	26.4 T	22.2 T	23 T	15.8 T	10.9 T	**101 T**
G384-2	LW2-G384-2	7.91	29.8	16.7	16.3	12.4	8.95	**92.1 T**
G385	LW2-G385	7.76	17.7	17.6	9.92	7.64	12.6	**73.2 T**
G386	LW2-G386	19.7	11.3	5.85	3.8	2.62	4.29	**47.6 T**
G387	LW2-G387	6.65	47.1	13	8.7	4.69	5.92	**86.1 T**
G388	LW2-G388	0.84	0.43	0.32	0.32	0.35	0.43	**2.69 T**
G389	LW2-G389	39.4	17	7.24	3.15	2.5	9.08	**78.4 T**
G390	LW2-G390	1.61	30.4	17.6	13.9	8.98	10.5	**83 T**
G391	LW2-G391	31.7	23.5	12.6	7.4	4.43	7.4	**87 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
G392	LW2-G392	29.9	16.9	9.85	5.54	4.21	4.35	**70.8 T**
G393	LW2-G393	8.47	16.9	13.8	10.8	7.39	6.72	**64.1 T**
G394	LW2-G394	13.7	0	27.5	7.26	4	9.8	**62.3 T**
G395	LW2-G395	23.5 T	12 T	5.98 T	3.71 T	2.52 T	4.62 T	**52.3 T**
G396	LW2-G396	32.4	15.6	9.2	5.34	3.36	8.32	**74.2 T**
G397	LW2-G397	6.26	18.3	19.8	21.4	10.6	16.6	**93 T**
G398	LW2-G398	35.4	17.4	14.2	8.78	4.65	7.62	**88.1 T**
G399	LW2-G399	18	0.8	7.11	1.72	1.15	1.65	**30.4 T**
G400	LW2-G400	31	9.25	5.4	2.94	1.88	3.52	**54 T**
G401	LW2-G401	26.4	18.2	8.28	4.01	2.45	2.96	**62.3 T**
G402	LW2-G402	8.3	14.7	14.1	12.6	8	9.32	**67 T**
G403	LW2-G403	1.17	1.08	0.56	0.58	0.36	0.32	**4.07 T**
G404	LW2-G404	35.4	18.6	9.12	4.66	3.01	4.5	**75.3 T**
G405	LW2-G405	0.83	0.68	0.54	0.51	0.35	0.28	**3.19 T**
G406	LW2-G406	22.9	13	7.28	4.32	3.44	4.56	**55.5 T**
G407	LW2-G407	25.8 T	17.8 T	8.62 T	5.05 T	2.78 T	4.29 T	**64.3 T**
G408	LW2-G408	9.4	16.5	12.2	11.8	8.43	9.1	**67.4 T**
G409	LW2-G409	18.9	15.8	10.7	4.71	3.46	5.77	**59.3 T**
G410-1	LW2-G410-1	34.6	21.7	13.7	7.34	4.51	6.25	**88.1 T**
G410-2	LW2-G410-2	22.1	26.7	15.3	8.98	4.81	5.29	**83.2 T**
G411	LW2-G411	2.56	0.81	0.41	0.38	0.47	0.17	**4.8 T**
G412	LW2-G412	24.9	21.4	10	7.74	3.48	7.31	**74.8 T**
G413	LW2-G413	1.63	0.93	0.6	0.53	0.49	0.32	**4.5 T**
G414	LW2-G414	29.5	20.5	11.3	6.32	4.54	4.64	**76.8 T**
G415	LW2-G415	7.57	9.24	9.6	10.2	6.33	8.5	**51.4 T**
G416	LW2-G416	12.3	19.7	16.7	11.4	9.09	13.3	**82.5 T**
G417	LW2-G417	11.6	3.07	1.72	1.59	0.99	1.8	**20.8 T**
G418	LW2-G418	38.1	22.6	11.3	6.22	3.59	6.01	**87.8 T**
G419	LW2-G419	34.4	23.1	9.05	5.73	3.5	5.63	**81.4 T**
G420	LW2-G420	31.1	12	7.47	4.17	2.62	2.66	**60 T**
G421	LW2-G421	10	14.4	13.5	10.8	8.14	11	**67.8 T**
G422	LW2-G422	21.5	17.1	9.29	4.64	3.04	4.93	**60.5 T**
G423	LW2-G423	33.8	25.1	12.5	6.68	4.86	4.83	**87.8 T**
G424	LW2-G424	27.4	14.4	8.7	4.17	3.28	5.91	**63.9 T**
G425	LW2-G425	0.61	0.51	0.33	0.22	0.53	0.14	**2.34 T**
G426	LW2-G426	15.1	15.8	10.8	10.3	7.11	8.65	**67.8 T**
G427	LW2-G427	24.2	19	11.5	6.42	3.75	4.3	**69.2 T**
G428	LW2-G428	47.3	10.6	5.9	4.61	3.55	3.92	**75.9 T**
G429	LW2-G429	26.7	13.2	5.58	3.44	3.02	3.75	**55.7 T**
G430	LW2-G430	0.22	0.11	0.03	0.19	0.13	0.1	**0.78 T**
G431	LW2-G431	15.4	16.3	9.04	5.91	4.15	6.86	**57.7 T**
G432	LW2-G432	19.1	10.3	4.52	2.79	1.94	3.33	**42 T**
G433-1	LW2-G433-1	21.3	16.3	8.41	6.07	3.47	6.35	**61.9 T**
G433-2	LW2-G433-2	23.2	15	8.05	5.76	3.55	5.78	**61.3 T**
G434	LW2-G434	12.9	5.77	2.54	2.56	0	1.67	**25.4 T**
G435	LW2-G435	53	9.52	4.75	4.33	2.49	4.81	**78.9 T**
G436	LW2-G436	2.99	1.53	0.73	0.45	0.37	0.39	**6.46 T**
G437	LW2-G437	29.1	12.6	4.9	2.88	1.8	2.93	**54.2 T**
G438	LW2-G438	6.43	3.64	2.11	1.49	1.06	1.53	**16.3 T**
G439	LW2-G439	18.6	10.5	6.48	3.12	3.73	1.85	**44.3 T**
G440	LW2-G440	26.6	20.1	10.9	6.01	3.77	5.21	**72.6 T**
G441	LW2-G441	26.8	17.9	9.04	4.49	2.47	5.02	**65.7 T**
G442	LW2-G442	19.5	12.6	6.87	4.42	2.99	4.42	**50.8 T**
G443	LW2-G443	41.1 T	13.1 T	6.63 T	4.03 T	1.89 T	2.43 T	**69.2 T**
G444	LW2-G444	43.3	22.2	11.2	4.56	2.12	5.93	**89.3 T**
G445	LW2-G445	18.7	19.8	13.7	8.47	3.2	7.51	**71.4 T**
G446	LW2-G446	5.26	1.92	1.03	0.87	0.75	0.77	**10.6 T**
G447	LW2-G447	18	24	15.2	6.95	4.04	6.98	**75.2 T**
G448	LW2-G448	0	40.7	14.1	7.36	3.99	5.24	**71.4 T**
G449	LW2-G449	51.6	17.5	9.74	4.16	3.42	4.75	**91.2 T**
G450-1	LW2-G450-1	38.9	22.8	12.5	7.38	3.59	7.58	**92.8 T**
G450-2	LW2-G450-2	47.7	20	11.9	5.97	2.33	6.93	**94.8 T**
G451	LW2-G451	15.8	7.3	4.66	2.56	1.73	3.87	**35.9 T**
G452	LW2-G452	48	18.2	10.1	4.37	4.13	3.73	**88.5 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
G453	LW2-G453	19.2	15.9	8.73	6.42	4.09	9.96	**64.3 T**
G454	LW2-G454	0.98	0.56	0.4	0.26	0.1	0.13	**2.43 T**
G455	LW2-G455	5.16	2.07	0.74	0.55	0.38	0.65	**9.55 T**
G456	LW2-G456	15.8	10.6	5.44	3.3	2.18	3.6	**40.9 T**
G457	LW2-G457	24.8	15.5	9.24	5.72	2.97	4.14	**62.4 T**
G458	LW2-G458	55.7	16.4	8.26	3.73	2.95	3.6	**90.6 T**
G459	LW2-G459	4.1	1.28	1.04	0.7	0.73	0.73	**8.58 T**
G460	LW2-G460	47.8	15.4	8.74	5.21	2.91	4.01	**84.1 T**
G461	LW2-G461	31	21.1	12.1	5.98	3.84	5.92	**79.9 T**
G462	LW2-G462	41.7	16.7	12	6.89	4.08	5.44	**86.8 T**
G463	LW2-G463	22.7	5.55	4.33	1.2	1.74	2.84	**38.4 T**
G464	LW2-G464	35.2	20.2	12.7	6.66	4.04	7.69	**86.5 T**
G465	LW2-G465	6.65	3.35	2.13	1.23	0.97	1.23	**15.6 T**
G466	LW2-G466	25.2	13	9.24	6.8	2.91	3.24	**60.4 T**
G467	LW2-G467	2.15	1.46	0.86	0.67	0.48	0.45	**6.07 T**
G468	LW2-G468	23.3	26.3	11.9	6.23	4.14	5.62	**77.5 T**
G469	LW2-G469	35.7	20.5	11.4	6.17	3.69	6.94	**84.4 T**
G470	LW2-G470	24.9	12.4	6.15	5.63	3.19	5.71	**58 T**
G471	LW2-G471	38.1	14.1	8.69	5.73	3.15	3.65	**73.4 T**
G472	LW2-G472	12.8	4.21	2.48	2.15	1.59	2.61	**25.8 T**
G473	LW2-G473	21 T	21.6 T	11.1 T	5.59 T	3.56 T	4.82 T	**67.7 T**
G474	LW2-G474	33.5	20.7	11.9	6.79	3.68	6.82	**83.4 T**
G475-1	LW2-G475-1	30.2 T	10.6 T	7.34 T	3.96 T	2.05 T	2.82 T	**57 T**
G475-2	LW2-G475-2	40.8	8.02	4.89	2.54	1.45	1.48	**59.2 T**
G476	LW2-G476	14.4	6.63	4.19	2.64	1.7	3.22	**32.8 T**
G477	LW2-G477	15.1	8.93	3.84	2.72	1.96	2.16	**34.7 T**
G478	LW2-G478	25.3	5.08	8.37	5.46	2.82	2.91	**49.9 T**
G479	LW2-G479	25	14.1	11.9	7.11	5.1	6.48	**69.7 T**
G480	LW2-G480	3.41	1.98	1.33	0.97	0.65	1.11	**9.45 T**
G481	LW2-G481	10.6	11.9	18.2	2.86	2.37	3.1	**49 T**
G482	LW2-G482	22.1	16	16	10.1	7.01	9.3	**80.5 T**
G483	LW2-G483	25.2	6.35	7.75	4.19	2.05	2.45	**48 T**
G484	LW2-G484	34.9	15.5	7.07	5.05	4.27	4.86	**71.7 T**
G485	LW2-G485	14.4	8.62	7.97	4.78	3.27	4.98	**44 T**
G486	LW2-G486	23.6	11.3	8.35	5.72	2.94	3.38	**55.3 T**
G487	LW2-G487	0.35	0.28	0.26	0.28	0.04	0.14	**1.35 T**
G488	LW2-G488	25.4	15.6	13.6	7.78	4.01	5.8	**72.2 T**
G489	LW2-G489	40.7 T	15.6 T	8.07 T	3.74 T	1.99 T	2.71 T	**72.8 T**
G490	LW2-G490	32	17.7	7.77	4.9	4.13	5.82	**72.3 T**
G491	LW2-G491	28.6	19.2	2.3	4.84	3.27	3.57	**61.8 T**
G492-1	LW2-G492-1	50.2 T	15.8 T	6.36 T	4.58 T	1.51 T	3.81 T	**82.3 T**
G492-2	LW2-G492-2	47.8	18.1	7.1	3.89	2.89	4.18	**84 T**
G493	LW2-G493	36.8 T	22 T	10.4 T	4.72 T	3.21 T	4.12 T	**81.3 T**
G494	LW2-G494	43.3	9.46	2.62	1.49	1.37	2.14	**60.4 T**
G495	LW2-G495	29.4	19	13.6	7.08	5.03	5.68	**79.8 T**
G496	LW2-G496	2.5	1	2.79	1.02	0.72	0.73	**8.76 T**
G497	LW2-G497	44.2	15.5	6.06	3.37	1.89	3.41	**74.4 T**
G498	LW2-G498	23.3	15.5	1.16	3.54	2.89	4.3	**50.7 T**
G499	LW2-G499	22.6	17.9	9.35	5.48	3.24	4.29	**62.9 T**
G500	LW2-G500	12.9	5.24	2.98	2.63	1.64	2.15	**27.5 T**
G501	LW2-G501	23.1	17.1	14.1	6.13	3.75	3.95	**68.1 T**
G502	LW2-G502	0.86	0.54	0.44	0.4	0.28	0.31	**2.83 T**
G503	LW2-G503	1.25	0.27	1.14	0.48	0.35	0.39	**3.88 T**
G504	LW2-G504	20.4	14.6	9.38	7.49	4.09	5.32	**61.3 T**
G505	LW2-G505	0.09	0.28	0.11	0.24	0.04	0.16	**0.92 T**
G506	LW2-G506	13.3	8.96	5.32	3.27	2.13	4.38	**37.4 T**
G507	LW2-G507	11.8	9.74	3.18	2.92	1.57	2.93	**32.1 T**
G508	LW2-G508	0.29	0.18	0.29	0.04	0.08	0.06	**0.94 T**
G509	LW2-G509	20.8	15.1	5.89	4.11	2.32	4.01	**52.2 T**
G510	LW2-G510	39.1	15.5	10.1	5.55	3.58	4.57	**78.4 T**
G511	LW2-G511	21.1	11.9	5.15	4.04	2.37	3.36	**47.9 T**
G512	LW2-G512	13.1	6.17	10.3	2.45	1.04	1.26	**34.3 T**
G513	LW2-G513	13.4	7.03	8.57	3.24	2.29	3.39	**37.9 T**
G514	LW2-G514	38.8	19.9	10.6	5.57	3.18	4.72	**82.8 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
G515	LW2-G515	36.7	27.6	6.22	5.91	4.1	5.1	**85.6 T**
G516	LW2-G516	8.19	5.09	6.66	2.01	1.51	2.26	**25.7 T**
G517	LW2-G517	28.2	10.3	4.79	2.66	2.41	4.32	**52.7 T**
G518	LW2-G518	14.8	7.42	4.69	2.71	1.87	3.06	**34.6 T**
G519-1	LW2-G519-1	32.8	21.3	10.8	7.44	4.86	7.56	**84.8 T**
G519-1	LW2-G519-2	35.7	21.8	10.6	7.39	6.1	6.43	**88 T**
G520	LW2-G520	30.1	20.2	12	7.11	2.67	3.56	**75.6 T**
G521	LW2-G521	17.1	17.9	11.6	8.13	4.61	7.46	**66.8 T**
U1C-1	LW2-U1C-1	0.9	0.77	0.84	0.74	0.75	0.71	**4.71 T**
U1C-2	LW2-U1C-2	0.803 T	0.523 T	0.713 T	0.613 T	0.52 T	0.777 T	**3.95 T**
U1C-3	LW2-U1C-3	2.12	0.83	0.95	0.73	0.69	1.09	**6.41 T**
U2C-1	LW2-U2C-1	9.38	4.29	2.29	1.6	1.8	2.71	**22.1 T**
U2C-2	LW2-U2C-2	9.76	4.98	2.86	2.22	1.72	2.66	**24.2 T**
U2C-3	LW2-U2C-3	4.15	1.67	1.07	1	1.09	1.23	**10.2 T**
U3C-1	LW2-U3C-1	6.17	4.28	2.39	2.18	1.35	1.14	**17.5 T**
U3C-2	LW2-U3C-2	12.2	6.27	3.16	2.56	1.56	2.1	**27.9 T**
U3C-3	LW2-U3C-3	7.04	4.18	2.28	2.16	1.11	1.08	**17.9 T**
U4Q-1	LW2-U4Q-1	33	12.6	4.47	3.49	2.25	3.21	**59 T**
U4Q-2	LW2-U4Q-2	27.4	9.6	3.34	2.45	1.98	3.03	**47.8 T**
U4Q-3	LW2-U4Q-3	29.4	11.7	3.77	1.93	2.01	3.19	**52 T**
U5Q-1	LW2-U5Q-1	1.39	0.73	0.35	0.48	0.34	0.79	**4.08 T**
U5Q-2	LW2-U5Q-2	2.22	0.61	0.19	0.49	0.28	0.57	**4.36 T**
U5Q-3	LW2-U5Q-3	2.13 T	0.733 T	0.417 T	0.56 T	0.48 T	0.89 T	**5.21 T**
U6TOC-1	LW2-U6TOC-1	10.3	10.8	8.26	5.96	3.6	3.76	**42.7 T**
U6TOC-2	LW2-U6TOC-2	4.6	24.2	21.2	21.9	13.5	13	**98.4 T**
U6TOC-3	LW2-U6TOC-3	8.58	25.5	21.4	16.4	9.05	11.5	**92.4 T**
Subsurface Sediment Samples								
C009	LW2-C009-B	1.33	1.04	0.71	0.59	0.31	0.71	**4.69 T**
C009	LW2-C009-C	16.7	24.3	12.3	8.22	5.22	10.3	**77 T**
C011-1	LW2-C011-B1	5.06 T	3.52 T	2.67 T	1.84 T	1.01 T	1.38 T	**15.5 T**
C011-1	LW2-C011-C1	11.5 T	18.5 T	17.3 T	12.1 T	7.27 T	10.7 T	**77.4 T**
C011-1	LW2-C011-D1	8.12 T	5.76 T	4.54 T	2.92 T	2.01 T	4.36 T	**27.7 T**
C011-2	LW2-C011-B2	2.19	1.25	0.94	0.77	0.58	0.48	**6.21 T**
C011-2	LW2-C011-C2	8.72	6.38	4.28	3.33	1.89	3.68	**28.3 T**
C011-2	LW2-C011-D2	12.7	19.4	16.2	12.5	6.42	13.6	**80.8 T**
C011-2	LW2-C011-E2	6.25	4.58	4.51	2.2	1.74	3.65	**22.9 T**
C015	LW2-C015-B	15.1	18.8	13.1	10.3	10.3	6.74	**74.3 T**
C015	LW2-C015-C	3.51	4.86	3.69	2.56	1.48	3.09	**19.2 T**
C015	LW2-C015-D	15.8	18.4	10.9	7.73	4.7	10.8	**68.3 T**
C019-1	LW2-C019-B1	1.27	1.26	0.76	0.63	0.41	0.73	**5.06 T**
C019-1	LW2-C019-C1	5.71	6.83	3.99	2.69	1.63	3.51	**24.4 T**
C020	LW2-C020-B	12 T	18.4 T	13.5 T	8.19 T	8.95 T	7.26 JT	**68.3 JT**
C020	LW2-C020-C	2.11	1.76	1.3	0.78	0.87	1.16	**7.98 T**
C022	LW2-C022-B	21.5	20.4	13.6	12.6	12.3	6.22	**86.6 T**
C022	LW2-C022-C	13	28.5	14.9	14.5	16.4	7.25	**94.6 T**
C025-1	LW2-C025-B1	7.22	6.33	3.08	2.31	1.81	3.3	**24.1 T**
C025-1	LW2-C025-C1	14.7	22.3	13.8	7.22	5.84	10.7	**74.6 JT**
C025-2	LW2-C025-D2	0.327 T	0.367 T	0.397 T	0.207 T	0.15 T	0.147 T	**1.6 T**
C027	LW2-C027-B	8.17	6.31	5.17	2.55	1.89	4.47	**28.6 T**
C027	LW2-C027-C	9.35	8.07	5.4	3.23	2.17	4.78	**33 T**
C034	LW2-C034-B	1.55	1.31	1.08	1.05	0.74	0.77	**6.5 T**
C034	LW2-C034-C	2.69	2.82	2.78	2.03	1.12	2.24	**13.7 T**
C034	LW2-C034-E	1.87	2.2	1.71	1.38	0.78	1.32	**9.26 T**
C038	LW2-C038-B	1.73	1.51	1.06	0.89	0.7	0.47	**6.36 T**
C038	LW2-C038-C	1.42	0.91	0.62	0.45	0.49	0.55	**4.44 T**
C038	LW2-C038-D	13	11.1	8.51	4.94	3.1	7.01	**47.7 T**
C060	LW2-C060-B	12.2	15.8	8.8	6.45	3.32	5.13	**51.7 T**
C060	LW2-C060-C	10.1	15.8	10.7	6.82	3.6	5.26	**52.3 T**
C061	LW2-C061-B	3.23	3.89	2.48	1.47	0.66	0.65	**12.4 T**
C061	LW2-C061-C	6.58	10.6	9.43	5.87	2.58	2.93	**38 T**
C061	LW2-C061-E	2.56	1.36	0.88	0.52	0.29	0.34	**5.95 T**
C062	LW2-C062-B	1.13 T	0.873 T	0.483 T	0.387 T	0.31 T	0.507 T	**3.69 T**
C062	LW2-C062-C	6.62	8.65	6.04	3.48	2.04	4.26	**31.1 T**
C062	LW2-C062-D	0.37	0.39	0.27	0.19	0.19	0.32	**1.73 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
C064	LW2-C064-B	14	22	13.2	7.25	4.71	9.94	**71.1 T**
C064	LW2-C064-C	13.7	19.1	17.3	12.5	8.4	12.9	**83.9 T**
C066	LW2-C066-B	13.4	13.3	8.28	5.16	2.9	7.13	**50.2 T**
C066	LW2-C066-C	16.2	9.33	6.94	5.13	2.81	5.57	**46 T**
C066	LW2-C066-F	7.71	19.8	27.4	16.6	7.76	13.5	**92.8 T**
C067	LW2-C067-B	16.7	14	9.24	6.35	5.83	3.94	**56.1 T**
C067	LW2-C067-D	14.6	18.3	16.1	10.5	6.51	12.8	**78.8 T**
C067	LW2-C067-E	7.85	13.2	9.35	6.37	5.54	7.04	**49.4 T**
C073	LW2-C073-B	0.97	1.36	1.04	1.11	0.5	1.04	**6.02 T**
C073	LW2-C073-C	6.13	10.2	8.52	5.23	4.42	6.17	**40.7 T**
C073	LW2-C073-D	2.19	2.08	1.39	1.26	0.77	1.44	**9.13 T**
C074	LW2-C074-B	11.9	11.1	7.86	6.03	4.03	5.51	**46.4 T**
C074	LW2-C074-C	1.05	1.11	0.84	0.79	0.57	0.49	**4.85 T**
C074	LW2-C074-D	5.12	6.65	4.98	3.19	1.92	4.14	**26 T**
C074	LW2-C074-F	0.127 T	0.23 T	0.13 T	0.107 T	0.0433 T	0.0333 T	**0.671 T**
C077	LW2-C077-C	10	9.57	6.12	3.64	1.41	1.35	**32.1 T**
C077	LW2-C077-D	13.3	24.6	20.6	11.5	4.12	3.91	**78 T**
C086	LW2-C086-B	6.96 T	17 T	15.7 T	11 T	5.23 T	7.81 T	**63.7 T**
C086	LW2-C086-C	0.14	0	0.19	0	0.04	0.03	**0.4 T**
C093	LW2-C093-B	3.79	9.39	15.8	14.9	16.4	22.9	**83.2 T**
C093	LW2-C093-C	19.7	11.9	6.29	3.61	2.2	5.16	**48.9 T**
C105	LW2-C105-B	23.3	18	10.2	6.05	3.07	7.7	**68.3 T**
C105	LW2-C105-C	16.6	16.8	12.1	8.76	4.3	7.95	**66.5 T**
C111-1	LW2-C111-B	19.3	19.7	14.9	4.69	6.25	6.11	**71 T**
C111-1	LW2-C111-C	16.5	21.7	15.1	12.3	6.3	13.6	**85.5 T**
C111-1	LW2-C111-F	5.52	7	5.42	4.41	2.11	5.08	**29.5 T**
C111-2	LW2-C111-B2	15.7	18.9	11.2	8.22	6.13	6.81	**67 T**
C111-2	LW2-C111-C2	15.5	22.2	13.4	13	5.99	13.1	**83.2 T**
C111-2	LW2-C111-E2	14.1	18.6	15.6	11.8	6.77	13.4	**80.3 T**
C112	LW2-C112-B	17.6	15.9	10.3	7.85	5.48	6.1	**63.2 T**
C112	LW2-C112-C	15.4	18.4	11.9	9.15	8	8.12	**71 T**
C112	LW2-C112-D	13	18.2	13.6	11.6	6.79	13.9	**77.1 T**
C121	LW2-C121-B	10.9	15.6	12.4	7.42	4.52	10.9	**61.7 T**
C122	LW2-C122-B	21	18.3	11.6	7.89	5.48	8.74	**73 T**
C122	LW2-C122-C	15.4	17.4	11.9	8.36	4.71	11.7	**69.5 T**
C130	LW2-C130-B	6.47	13.4	12.1	9.12	5.61	8.37	**55.1 T**
C130	LW2-C130-C	0.35	0.16	0.31	0.22	0.05	0.12	**1.21 T**
C130	LW2-C130-E	36.8	14.6	7.45	4.35	2.5	5.43	**71.1 T**
C133	LW2-C133-B	20.2	23.6	13.6	8.16	4.14	9.49	**79.2 T**
C133	LW2-C133-D	15.5	20.7	14.5	9.06	5.82	14.8	**80.4 T**
C135	LW2-C135-B	18.6	25	13.3	7.83	5.79	8.19	**78.7 T**
C135	LW2-C135-C	12.8	15.9	9.94	7.27	3.06	5.39	**54.4 T**
C136	LW2-C136-B	13.4	16.4	12.1	7.7	4.67	9.1	**63.4 T**
C136	LW2-C136-C	14.9	19	17.4	11.5	6.59	13.8	**83.2 T**
C136	LW2-C136-D	11.8	18.8	14.6	10.8	5.26	11.6	**72.9 T**
C138	LW2-C138-C	20.9	17.1	8.12	4.78	2.23	4.29	**57.4 T**
C139	LW2-C139-B	20.1	23	12.5	8.2	5.16	10.7	**79.7 T**
C139	LW2-C139-C	12.4	13.7	8.51	5.56	3.55	7.62	**51.3 T**
C142	LW2-C142-B	13.1	18.4	12.9	8.74	5.79	10.2	**69.1 T**
C142	LW2-C142-C	12.4	22.5	17.1	12.7	11.1	9.18	**85 T**
C144	LW2-C144-B	17.9	26	14.9	11.3	5.55	10.8	**86.5 T**
C144	LW2-C144-C	16.1	26.2	16.4	12.6	6.3	9.74	**87.3 T**
C144	LW2-C144-D	24.5	15.7	6.92	4.37	1.9	3.55	**56.9 T**
C144	LW2-C144-E	20.2	4.14	1.75	1	0.27	3.34	**30.7 T**
C147	LW2-C147-B	23.1	13.5	10.6	8.29	8.14	9.5	**73.1 T**
C147	LW2-C147-C	13.4	18.1	12.8	11.1	5.7	11.5	**72.6 T**
C147	LW2-C147-E	11.3	18.1	14.4	12.5	9.01	8.38	**73.7 T**
C148	LW2-C148-B	21.7	15.8	12.6	8.28	7.33	4.72	**70.4 T**
C148	LW2-C148-C	21.2	20.1	15.4	12.5	13.3	5.02	**87.5 T**
C152	LW2-C152-B	27.9	18.9	13.9	12.2	11.2	4.91	**89 T**
C152	LW2-C152-C	40.2	13.1	12.9	9.75	2.99	6.02	**85 T**
C155	LW2-C155-B	12.8	11.2	9.83	5.78	5.01	7.23	**51.9 T**
C155	LW2-C155-C	12.3 T	10.4 T	7.89 T	5.42 T	3.6 T	7.56 T	**47.2 T**
C156	LW2-C156-B	16.3 T	24.5 T	15 T	9.69 T	7.82 T	9.08 T	**82.4 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
C156	LW2-C156-C	12.6	22.3	16.6	10.3	8.06	12.5	**82.4 T**
C157	LW2-C157-B	15.6	16.7	10.9	7.86	4	8.78	**63.8 T**
C157	LW2-C157-C	15.8	15	11.7	7.75	4.91	7.32	**62.5 T**
C158	LW2-C158-B	17.6	24.9	15.5	10.1	6.89	8.47	**83.5 T**
C158	LW2-C158-C	17.2 T	22 T	14.8 T	11.3 T	7.58 JT	10.1 T	**83 JT**
C158	LW2-C158-D	20.6	18.8	11.7	8.17	4.98	7.55	**71.8 T**
C160	LW2-C160-B	15.2	15.3	11.8	7.16	4.28	7.76	**61.5 T**
C160	LW2-C160-C	13.9	13	9.93	6.44	4.51	8.24	**56 T**
C161	LW2-C161-B	14.6	15	8.83	6.99	3.95	6.79	**56.2 T**
C161	LW2-C161-C	11.1	15.1	9.08	6.83	3.91	7.51	**53.5 T**
C162	LW2-C162-B	19.8	15	20.8	9.23	6.7	11.3	**82.8 T**
C162	LW2-C162-C	20.9	11.8	12.6	9.96	5.56	11.8	**72.6 T**
C163-1	LW2-C163-B1	0.18	0.2	0.13	0	0.11	0.03	**0.65 T**
C163-1	LW2-C163-C1	9.38	14.8	9.01	6.59	2.85	4.01	**46.6 T**
C163-2	LW2-C163-B2	0.23 T	0.28 T	0.12 T	0.15 T	0.005 T	0.075 T	**0.86 T**
C163-2	LW2-C163-C2	9.25 T	11.4 T	7.54 T	4.85 T	2.07 T	2.68 T	**37.8 T**
C164	LW2-C164-B	1.05	1.14	0.82	0.7	0.56	0.61	**4.88 T**
C164	LW2-C164-C	0.46	0.4	0.22	0.16	0.2	0.14	**1.58 T**
C164	LW2-C164-E	15.3	20.5	16.3	12.5	7.3	11.9	**83.8 T**
C166	LW2-C166-B	8.56	6.48	4.19	2.9	1.21	3.02	**26.4 T**
C166	LW2-C166-C	12.1	16.7	11.4	11.1	5.72	7.77	**64.8 T**
C166	LW2-C166-D	10.8	18.6	14	10	6.66	11.4	**71.5 T**
C169	LW2-C169-B	18.1	20.8	16.6	9.35	6.25	11	**82.1 T**
C169	LW2-C169-C	16.4	19.6	16.4	9.65	9.51	8.81	**80.4 T**
C170	LW2-C170-B	7.16	11.1	9.81	4.39	2.87	6.61	**41.9 T**
C170	LW2-C170-C	2.96	5.51	5.08	2.52	2.18	3.32	**21.6 T**
C171	LW2-C171-B	16.3	21.3	15.4	10.7	8.03	10.1	**81.8 T**
C171	LW2-C171-C	15.9	19.1	20.4	8.15	6.6	12.9	**83.1 T**
C172	LW2-C172-B	24.4	19.9	12.8	5.97	3.64	7.08	**73.8 T**
C172	LW2-C172-C	8.76	14.2	9.46	4.81	3.42	6.82	**47.5 T**
C173	LW2-C173-B	19.5	23.5	15	7.06	4.7	9.18	**78.9 T**
C173	LW2-C173-C	12.4	22.1	17.5	9.24	6.35	12.6	**80.2 T**
C176	LW2-C176-B	23.5	17.6	14.6	7.28	5.92	11.9	**80.8 T**
C176	LW2-C176-C	6.82	9.48	9.89	6.72	3.09	7.54	**43.5 T**
C176	LW2-C176-G	5.04	1.59	0.74	0.48	0.32	0.74	**8.91 T**
C179	LW2-C179-B	16.1	15.6	12.5	9.8	6.17	12.3	**72.5 T**
C179	LW2-C179-C	8.1	9.83	8.13	6.61	4.03	8.34	**45 T**
C179	LW2-C179-D	9.75	10	9.1	6.7	5.65	8.9	**50.1 T**
C182	LW2-C182-B	6.13	11.4	10.3	5.6	3.95	8.29	**45.7 T**
C182	LW2-C182-C	14.2	20.8	16.5	9.18	7.51	10.2	**78.4 T**
C184	LW2-C184-B	18.8	18.5	10.8	8.16	6.29	9.09	**71.6 T**
C184	LW2-C184-C	14.4	14.5	9.97	7.14	4.39	10.8	**61.2 T**
C184	LW2-C184-D	14.2	13.3	9.13	6.69	3.8	10.6	**57.7 T**
C185	LW2-C185-B	10.5	15.4	11.8	6.24	4.68	8.51	**57.1 T**
C185	LW2-C185-C	10.2	9.72	8.62	4.5	3.5	6.35	**42.9 T**
C192	LW2-C192-B	16	17.5	10.5	6.42	3.05	9.82	**63.3 T**
C192	LW2-C192-C	9.85	8.37	6.57	4.34	3.32	7.37	**39.8 T**
C192	LW2-C192-D	2.96	1.88	1.26	0.92	0.56	1.21	**8.79 T**
C196	LW2-C196-B	0.58	1.01	0.77	0.65	0.35	0.51	**3.87 T**
C196	LW2-C196-C	0.27	0.23	0.18	0.18	0.03	0.12	**1.01 T**
C197	LW2-C197-B	18.5	18.1	9.31	6.98	6.11	6.27	**65.3 T**
C197	LW2-C197-C	7.66	10.7	6.96	6.77	4.57	7.61	**44.3 T**
C197	LW2-C197-D	0	0	0.16	0.13	0.01	0.09	**0.39 T**
C199	LW2-C199-B	22.8	15.4	6.51	3.19	2.22	4.6	**54.7 T**
C199	LW2-C199-C	20	16.3	7.86	5.01	3.12	8.61	**60.9 T**
C202	LW2-C202-B	12.8	17.6	13.4	8.43	7.57	13.7	**73.5 T**
C202	LW2-C202-C	12.1	14.3	11	10	6.26	14.6	**68.3 T**
C203	LW2-C203-B	20.4	21.5	10.1	4.84	3.12	7.38	**67.3 T**
C203	LW2-C203-C	12.1	11.2	7.13	4.91	3.16	6.7	**45.2 T**
C203	LW2-C203-E	12.1	12	7.06	4.73	2.8	7.76	**46.5 T**
C206	LW2-C206-B	11	13.4	8.8	7.3	4.57	9.96	**55 T**
C206	LW2-C206-C	0.1	0.37	0.17	0.15	0.17	0.1	**1.06 T**
C207-1	LW2-C207-B	14.1	17.9	13	7.07	7.36	7.64	**67.1 T**
C207-1	LW2-C207-C	15.2	10.7	7.33	3.02	2.76	6.13	**45.1 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
C207-1	LW2-C207-D	13.9	13.5	8.35	4.23	3.81	7.43	**51.2 T**
C207-2	LW2-C207-B2	10.2 T	14.5 T	10.3 T	5.63 T	4.1 T	9.38 T	**54.1 T**
C207-2	LW2-C207-C2	11.1 T	8.71 T	5.24 T	2.72 T	2.36 T	4.74 T	**34.9 T**
C210	LW2-C210-B	16.3	13.7	11	7.41	4.2	10.7	**63.3 T**
C210	LW2-C210-C	21.8	8.61	3.37	3.72	1.5	3.43	**42.4 T**
C213	LW2-C213-B	2.09	0.63	0.28	0.17	0.08	0.34	**3.59 T**
C213	LW2-C213-C	7.27	8.17	5.24	3.47	1.97	5.52	**31.6 T**
C213	LW2-C213-D	18.1	6.76	2.73	1.63	0.89	1.95	**32.1 T**
C215	LW2-C215-B	0.51	0.26	0.22	0.27	0.02	0.13	**1.41 T**
C215	LW2-C215-C	0.11	0.11	0.15	0.01	0.08	0.05	**0.51 T**
C220	LW2-C220-B	0.42	0.42	0.21	0.35	0.21	0.53	**2.14 T**
C220	LW2-C220-C	0.572	0.46	0.3	0.28	0.17	0.55	**2.33 T**
C221	LW2-C221-B	0.75	1.05	0.93	0.45	0.31	0.19	**3.68 T**
C221	LW2-C221-C	0.25	0.14	0.22	0.13	0.15	0.26	**1.15 T**
C221	LW2-C221-D	26.3	12.3	8.25	3.78	2.31	3.8	**56.7 T**
C228	LW2-C228-B	3.72	6.72	4.97	3.46	2.33	3.63	**24.8 T**
C231	LW2-C231-B	14.7	17.5	13	8.19	5.39	11.8	**70.6 T**
C231	LW2-C231-C	15.9	12.4	9.09	4.32	4.07	7.37	**53.2 T**
C232	LW2-C232-B	0.543 T	0.55 T	0.497 T	0.527 T	0.103 T	0.577 T	**2.8 T**
C232	LW2-C232-C	0.23	0.26	0.12	0.31	0.09	0.23	**1.24 T**
C240	LW2-C240-B	20.3 T	18.9 T	11.9 T	6.67 T	5.21 T	7.84 T	**70.8 T**
C240	LW2-C240-D	13.3	16.4	12.6	8.72	8.01	8.39	**67.4 T**
C240	LW2-C240-E	20.1	13.1	10.2	6.82	6.78	6.42	**63.4 T**
C244	LW2-C244-B	25	16.1	9.34	3.77	3.94	7.73	**65.9 T**
C244	LW2-C244-C	18.6	11.4	6.74	5.16	3.64	8.38	**53.9 T**
C245	LW2-C245-B	11.9	13.2	7.1	5.06	3.88	6.66	**47.8 T**
C245	LW2-C245-C	9.83	6	3.82	2.57	2	3.17	**27.4 T**
C245	LW2-C245-D	15.9	17.6	9.68	8.91	4.66	10.1	**66.9 T**
C245	LW2-C245-E	7.82	10.7	6.79	3.56	3.1	5.21	**37.2 T**
C247	LW2-C247-B	20.5	29.6	16.8	6.98	3.05	10	**86.9 T**
C247	LW2-C247-C	18.9	28.9	18.8	10.4	5.38	8.78	**91.2 T**
C247	LW2-C247-D	23	23.8	18.5	9.54	5.14	7.99	**88 T**
C252	LW2-C252-B	0.65	0.37	0.33	0.31	0.16	0.22	**2.04 T**
C252	LW2-C252-C	2.44 T	2.3 T	2.08 T	1.34 T	1.23 T	1.31 T	**10.7 T**
C254	LW2-C254-B	10.8	7.06	5.37	3.64	2.99	4.76	**34.6 T**
C254	LW2-C254-C	1.71	1.51	0.83	0.99	0.72	1.69	**7.45 T**
C255	LW2-C255-B	0.177 T	0.01 T	0 T	0.0467 T	0 T	0.0567 T	**0.29 T**
C255	LW2-C255-C	0.17	0.01	0	0.11	0	0.14	**0.43 T**
C257	LW2-C257-B	7.33	4.44	3.27	2.53	1.72	3.91	**23.2 T**
C258	LW2-C258-B	0.27 T	0.27 T	0.173 T	0.257 T	0.11 T	0.12 T	**1.2 T**
C258	LW2-C258-C	0.89	1.36	1.21	0.66	1.05	0.87	**6.04 T**
C260	LW2-C260-B	1.87	1.66	1.38	1.13	0.82	1.4	**8.26 T**
C260	LW2-C260-C	0.46	0.31	0.22	0.31	0.23	0.02	**1.55 T**
C263	LW2-C263-B	13.8 T	25 T	15.3 T	8.59 T	4.12 T	5.18 T	**72 T**
C263	LW2-C263-D	13.4 T	15.8 T	13.9 T	11.5 T	6 T	14.8 T	**75.4 T**
C264	LW2-C264-B	11.3	18.5	13.6	10.8	9.28	7.81	**71.3 T**
C264	LW2-C264-C	7.45	9.67	5.34	4.58	2.63	6.34	**36 T**
C266	LW2-C266-B	5.16	2.75	2.31	0.84	0.56	1.02	**12.6 T**
C266	LW2-C266-C	0.3	0.34	0.38	0.35	0.33	0.59	**2.29 T**
C267	LW2-C267-B	17.4 JT	12.4 T	9.51 T	6.72 T	4.25 T	9.74 T	**60 JT**
C267	LW2-C267-C	2.31	0.88	0.66	0.47	0.49	1.17	**5.98 T**
C268	LW2-C268-B	1.96	0.06	0.34	0.81	0.49	1.16	**4.82 T**
C268	LW2-C268-C	1.31	0.39	0.32	0.34	0.36	0.7	**3.42 T**
C269	LW2-C269-B	11.7	23.7	14.4	13.2	6.8	14.1	**83.9 T**
C269	LW2-C269-C	16.7	17.8	13.7	12	7.54	11.8	**79.5 T**
C269	LW2-C269-F	14.2	16.4	12.9	9.24	4.94	8.08	**65.8 T**
C270	LW2-C270-B	9.51	11.4	11.3	9.3	4.26	6.81	**52.6 T**
C270	LW2-C270-C	12.9	16.3	15.1	10.1	7.31	11.2	**72.9 T**
C272	LW2-C272-B	0.11	0.07	0.19	0.1	0	0	**0.47 T**
C272	LW2-C272-C	0.06	0.05	0.08	0	0.1	0.02	**0.31 T**
C273	LW2-C273-B	12.9	18.7	14.8	10.7	5.18	7.23	**69.5 T**
C273	LW2-C273-C	12.1	14.8	11.3	7.75	5.17	9.24	**60.4 T**
C276	LW2-C276-B	14.7	17.4	15.8	9.79	8.73	11.1	**77.5 T**
C276	LW2-C276-C	3.26	4.12	7.22	4.44	2.63	5.11	**26.8 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
C277	LW2-C277-B	19.7	18.5	18.2	10.8	5.51	12.6	**85.3 T**
C277	LW2-C277-C	12.2	16.4	17.3	14.8	8.96	15.4	**85.1 T**
C277	LW2-C277-D	11.4	22.6	17.7	13.1	7.51	13.4	**85.7 T**
C278	LW2-C278-B	8.96	19.6	13.3	9.39	6.34	10.1	**67.7 T**
C278	LW2-C278-C	7.2	11.5	10.3	7.77	5.47	7.13	**49.4 T**
C278	LW2-C278-D	0.88	1.06	0.81	0.57	0.53	0.63	**4.48 T**
C280	LW2-C280-B	19.4	20.5	15.2	8.78	5.53	11.8	**81.2 T**
C280	LW2-C280-C	15.4	17.1	13.6	7.31	4.1	8.62	**66.1 T**
C280	LW2-C280-D	8.89	2.22	1.18	0.98	0.86	1.64	**15.8 T**
C282	LW2-C282-B	2.63 T	2.25 T	2.01 T	1.52 T	0.967 T	1.88 T	**11.3 T**
C282	LW2-C282-C	1.67	1.66	1.34	0.86	0.68	0.95	**7.16 T**
C282	LW2-C282-D	3	2.33	1.73	1.11	0.838	1.45	**10.5 T**
C283	LW2-C283-B	11.5	17.5	15	12.7	7.12	12.6	**76.4 T**
C283	LW2-C283-C	12.8	15.3	12.5	8.42	4.71	11.6	**65.3 T**
C283	LW2-C283-E	6.05	2.62	1.87	1.36	0.83	2.07	**14.8 T**
C284	LW2-C284-B	15.3	22.9	20.8	10.4	9.64	7.05	**86.1 T**
C284	LW2-C284-C	4.02	6.32	9.27	5.69	3.09	6.04	**34.4 T**
C284	LW2-C284-D	1.36 T	0.877 T	0.587 T	0.263 T	0.213 T	0.267 T	**3.57 T**
C288	LW2-C288-B	12.6	17.5	16.5	10.3	7.71	14.2	**78.8 T**
C288	LW2-C288-C	12.7	20.7	15.2	11.1	6.78	15.2	**81.7 T**
C288	LW2-C288-D	13.6 T	15.8 T	14.4 T	8.99 T	5.99 T	12.3 T	**71.1 T**
C289	LW2-C289-B	12.3	14.6	14.1	9.86	6.75	10.9	**68.5 T**
C289	LW2-C289-C	10.8	7.54	10.1	6.61	4.16	9.41	**48.6 T**
C289	LW2-C289-E	0.05	0.12	0.11	0	0.03	0	**0.31 T**
C290	LW2-C290-B	0.74	0.9	0.88	0.56	0.62	0.61	**4.31 T**
C290	LW2-C290-C	0.58	0.43	0.47	0.16	0.24	0.27	**2.15 T**
C291	LW2-C291-B	16.9	25	17.4	9.58	7.05	13.1	**89 T**
C291	LW2-C291-C	10.6	19.8	20.1	11.9	7.56	14.9	**84.9 T**
C293-1	LW2-C293-B	8.36	17.2	15.1	13.2	7.63	17.2	**78.7 T**
C293-1	LW2-C293-C	12.6	16.3	14.7	13.3	8.22	15.9	**81 T**
C293-1	LW2-C293-D	24.9	3.53	6.04	6.26	4.19	7.65	**52.6 T**
C293-2	LW2-C293-B2	15.7	13.3	15.8	10.8	7.54	15.9	**79 T**
C293-2	LW2-C293-C2	15.3	13.1	11.4	6.31	5.31	9.84	**61.3 T**
C294	LW2-C294-B	13	15.2	14.1	10.1	5.98	10.2	**68.6 T**
C294	LW2-C294-C	10.3	15.5	13	9.34	5.7	11.7	**65.5 T**
C294	LW2-C294-D	9.43	9.58	5.98	4.55	3.56	6.38	**39.5 T**
C295	LW2-C295-B	9.21	25.1	21	15.3	6.58	13.7	**90.9 T**
C295	LW2-C295-C	9.19 JT	18.7 T	18.2 T	14.1 T	8.34 T	16.8 T	**85.3 JT**
C299	LW2-C299-B	9.64	18.8	17.7	12.6	7.62	9.16	**75.5 T**
C299	LW2-C299-C	1.93	1.4	1.37	0.96	0.59	0.86	**7.11 T**
C3002	LW2-C300-B	16.5	27.4	16.4	9.82	7.16	9.85	**87.1 T**
C3002	LW2-C300-C	6.23	24.6	17.1	10.7	5.53	10.8	**75 T**
C3002	LW2-C300-D	1.28	1.48	1	1.22	0.68	1.6	**7.26 T**
C301	LW2-C301-B	15.1	14.4	11.3	9.36	4.28	9.88	**64.3 T**
C301	LW2-C301-C	3.27	5.15	4.86	3.65	1.32	2.6	**20.9 T**
C301	LW2-C301-D	0.45	0.26	0.3	0.2	0.06	0.23	**1.5 T**
C301	LW2-C301-E	0.2	0.45	0.2	0.24	0.01	0.09	**1.19 T**
C301	LW2-C301-G	10	17.1	11.2	11	4.33	11.3	**64.9 T**
C302	LW2-C302-B	15	15.7	11.8	8.54	6.6	7.01	**64.7 T**
C302	LW2-C302-C	2.5	3.49	2.8	2.54	1.5	2.14	**15 T**
C305-1	LW2-C305-B1	10.7	10.7	11.1	7.28	4.44	8.3	**52.5 T**
C305-1	LW2-C305-C1	2.42	1.64	1.36	1.21	0.82	1.21	**8.66 T**
C305-1	LW2-C305-D1	2.26	1.54	1.4	0.86	0.91	1.12	**8.09 T**
C305-2	LW2-C305-B2	13	8.65	9.19	6.55	3.02	7.05	**47.5 T**
C305-2	LW2-C305-C2	12.7	11.9	9.62	7.66	4.85	8.75	**55.5 T**
C305-2	LW2-C305-D2	1.07	0.85	0.64	0.45	0.38	0.46	**3.85 T**
C311	LW2-C311-B	12.9	15.7	17.1	11.2	6.09	13.7	**76.7 T**
C311	LW2-C311-C	12.1	19.3	15.5	12.4	9.49	14.1	**82.9 T**
C311	LW2-C311-E	9.6	9.38	8.6	6.1	3.13	6.8	**43.6 T**
C313	LW2-C313-B	0.97	0.98	1.14	0.72	0.45	0.68	**4.94 T**
C313	LW2-C313-C	0.97	1.03	0.96	0.78	0.5	0.92	**5.16 T**
C314	LW2-C314-B	12.4	21.3	14.2	9.07	5.6	14.2	**76.8 T**
C314	LW2-C314-C	12.4 T	19.2 T	12.4 T	10.5 T	5.85 T	12.9 T	**73.3 T**
C316	LW2-C316-B	23.4	16.1	9.62	4.85	2.54	5.02	**61.5 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
C316	LW2-C316-C	22.2	16.8	14	8.05	5.13	10.2	**76.4 T**
C316	LW2-C316-D	15.4	13.7	15.9	11	6.82	12.6	**75.4 T**
C323	LW2-C323-B	7.52	5.84	3.1	2.22	1.33	2.9	**22.9 T**
C323	LW2-C323-C	5.88	7.9	5.81	4.19	2.59	4.64	**31 T**
C323	LW2-C323-D	1.75	2.66	2.04	1.67	0.94	1.31	**10.4 T**
C324	LW2-C324-B	7.98	12.1	6.31	5.47	5.14	5.3	**42.3 T**
C324	LW2-C324-D	7.5	8.19	4.27	3.14	2.65	4.81	**30.6 T**
C324	LW2-C324-E	8	13.8	11.9	8.34	4.66	11.9	**58.6 T**
C326	LW2-C326-B	14.4	17.5	10.6	6.51	4.59	9.55	**63.2 T**
C326	LW2-C326-C	2.46	1.16	0.57	0.43	0.17	0.41	**5.2 T**
C327	LW2-C327-B	2.99	3.24	2.49	1.4	1.28	2.27	**13.7 T**
C327	LW2-C327-C	6.52	8.49	4.81	3.21	2.37	5.33	**30.7 T**
C329	LW2-C329-B	15.6	5.69	2.72	1.53	0.95	1.58	**28.1 T**
C329	LW2-C329-C	20.3	10.4	4.08	2.61	1.88	2.37	**41.6 T**
C329	LW2-C329-D	23.3	8.31	4.32	2.31	1.15	1.8	**41.2 T**
C331	LW2-C331-B	2.79	2.44	2.08	1.84	0.8	1.38	**11.3 T**
C331	LW2-C331-C	30.4	20.3	11.6	7.89	3.1	6.22	**79.5 T**
C331	LW2-C331-D	2.94	2.58	1.78	1.57	0.84	1.69	**11.4 T**
C331	LW2-C331-E	22.7	28.2	15.6	6.82	2.3	4.24	**79.9 T**
C332	LW2-C332-B	12.8	23.3	15.5	11.4	8.84	9.14	**81 T**
C332	LW2-C332-C	10.1	5.48	4.12	2.3	1.12	1.34	**24.5 T**
C333	LW2-C333-B	9.64 T	5.06 T	2.68 T	1.79 T	1.28 T	2.97 T	**23.4 T**
C333	LW2-C333-C	1.13	4.5	2.57	1.66	1.13	2.27	**13.3 T**
C333	LW2-C333-E	0.77	0.93	0.44	0.45	0.31	0.5	**3.4 T**
C334	LW2-C334-B	10.4	12	9.62	7.52	5.37	6.84	**51.8 T**
C334	LW2-C334-C	0.75	0.77	0.56	0.31	0.27	0.45	**3.11 T**
C335	LW2-C335-B	6.96	3.11	1.66	1.06	1.12	1.29	**15.2 T**
C335	LW2-C335-C	18.1	12.9	8.96	5.32	5.44	4.94	**55.7 T**
C341	LW2-C341-B	25.2	16	8.38	4.35	2.17	2.75	**58.9 T**
C342	LW2-C342-B	15.4	24.6	15.8	9.13	5.37	11.6	**81.9 T**
C342	LW2-C342-C	25.6	15.6	15.7	9.95	5	10.2	**82.1 T**
C342	LW2-C342-D	9.15	4.03	2.06	1.99	1.35	2.43	**21 T**
C342	LW2-C342-E	0.51	0.31	0.32	0.14	0.12	0.27	**1.67 T**
C346	LW2-C346-B	11.7	21.1	15.7	9.48	5.22	10.1	**73.3 T**
C346	LW2-C346-C	14.2	18.9	12.5	6.52	4.96	8.3	**65.4 T**
C347	LW2-C347-B	11.8	22	18.7	11.9	6.57	11.1	**82.1 T**
C347	LW2-C347-C	13.7	11.8	8.6	5.53	3.07	5.94	**48.6 T**
C347	LW2-C347-F	10.2	5.73	4.56	3.37	2.51	6.4	**32.8 T**
C348	LW2-C348-B	17.1	25.2	14.1	8.08	4.13	8.96	**77.6 T**
C348	LW2-C348-C	14.5	19.3	14	9.01	6.26	12.1	**75.2 T**
C348	LW2-C348-D	5.75	6.31	3.94	2.1	1.29	3.84	**23.2 T**
C349	LW2-C349-B	12.2	6.32	5.65	4.16	2.19	2.74	**33.3 T**
C349	LW2-C349-C	17	17.5	12.5	9.12	9.54	6.34	**72 T**
C351	LW2-C351-B	11.1	15	9.51	7.23	4.77	9.2	**56.8 T**
C351	LW2-C351-C	1.54 T	0.843 T	0.387 T	0.257 T	0.24 T	0.47 T	**3.74 T**
C351	LW2-C351-D	1.79	0.52	0.13	0.1	0.06	0.33	**2.93 T**
C351	LW2-C351-E	32	9.09	3.14	1.34	0.89	1.8	**48.3 T**
C352	LW2-C352-B	17.4	24.3	13.8	8.23	5.55	7.74	**77 T**
C352	LW2-C352-C	14.2	22	15.5	9.35	6.53	9.77	**77.4 T**
C352	LW2-C352-D	1.92	1.22	0.74	0.6	0.54	0.76	**5.78 T**
C356	LW2-C356-B	29.3	24.1	14.3	8.1	3.49	7.3	**86.6 T**
C356	LW2-C356-C	10.4	22.3	16.9	7.4	4.18	10.3	**71.5 T**
C356	LW2-C356-E	2.37	1.92	0.88	0.63	0.27	0.91	**6.98 T**
C357	LW2-C357-B	12.3	12.2	9.75	5.88	3.7	6.8	**50.6 T**
C357	LW2-C357-C	7.62	4.23	2.79	2.09	1.54	2.36	**20.6 T**
C359	LW2-C359-B	15.6 T	26.1 T	15.6 T	8.94 T	3.92 T	9.96 T	**80.1 T**
C359	LW2-C359-C	17.5	19.7	17.1	10.3	6.01	15.6	**86.2 T**
C359	LW2-C359-D	6.85	21.9	15.9	10.6	6.58	16.1	**77.9 T**
C361	LW2-C361-B	21	16.4	11.4	6.64	5.89	6.11	**67.4 T**
C362	LW2-C362-B	9.05 JT	24.4 T	17.8 T	8.04 T	4.17 T	18.7 T	**82.2 JT**
C362	LW2-C362-C	10.1	23.6	19.4	7.04	4.1	20.9	**85.1 T**
C362	LW2-C362-D	10.1	24.8	21.7	7.24	4.41	19	**87.3 T**
C364	LW2-C364-B	13.3	9.37	3.71	2.1	1.44	2.76	**32.7 T**
C364	LW2-C364-C	14.5	13.8	5.94	4.32	2.86	4.96	**46.4 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
C366-1	LW2-C366-B1	11.9 T	18.7 T	15.8 T	8.33 T	4.89 T	21.8 T	**81.4 T**
C366-1	LW2-C366-C1	9.59 T	18.6 T	13.8 T	8.3 T	4.74 T	15.8 T	**70.8 T**
C366-1	LW2-C366-D1	2.2 T	2.54 T	2.18 T	1.87 T	1.11 T	4.14 T	**14 T**
C366-1	LW2-C366-E1	7.12 T	10.3 T	8.1 T	5.86 T	3.51 T	10.1 T	**45 T**
C366-1	LW2-C366-G1	16.9 T	16.1 T	12 T	9.51 T	5.53 T	10.7 T	**70.7 T**
C366-2	LW2-C366-B2	10.4	16.9	16.4	6.89	4.37	20.9	**75.9 T**
C366-2	LW2-C366-C2	11.3	16.6	12.5	8.12	4.23	14.6	**67.4 T**
C366-2	LW2-C366-D2	6.31	8.81	7.28	4.85	2.96	9.11	**39.3 T**
C366-2	LW2-C366-F2	9.79	14.1	11.9	8.02	4.32	7.93	**56.1 T**
C368	LW2-C368-B	16.9 T	22.4 T	14.9 T	7.33 T	5.28 T	15.1 T	**81.9 T**
C368	LW2-C368-C	14.4	9.74	5.95	2.7	2.43	8.57	**43.8 T**
C368	LW2-C368-D	1.53	1.11	0.83	0.56	0.37	1.86	**6.26 T**
C368	LW2-C368-E	14.3	5.75	2.57	1.46	1.24	4	**29.3 T**
C371	LW2-C371-B	12.6	12	8.16	4.34	2.48	7.45	**47 T**
C371	LW2-C371-C	0.47	0.43	0.4	0.31	0.21	1.54	**3.36 T**
C371	LW2-C371-E	3.86	2.39	1.38	1.16	0.66	2.73	**12.2 T**
C372	LW2-C372-B	14.3	11.3	13.4	5.43	3.9	7.36	**55.7 T**
C372	LW2-C372-C	7.04	3.19	3.07	2.14	1.4	2.73	**19.6 T**
C373	LW2-C373-B	20.9	18.6	11.4	7.22	2.83	4.19	**65.1 T**
C373	LW2-C373-C	25.5	21.9	13.6	10.3	5.63	9.94	**86.9 T**
C377	LW2-C377-B	20.1	16.3	13.8	7.24	4.47	13.6	**75.5 T**
C377	LW2-C377-C	10.7	16.2	16.1	8.05	4.39	14.3	**69.7 T**
C377	LW2-C377-E	16	19.1	12.7	6.48	3.12	6.83	**64.2 T**
C379	LW2-C379-B	11.2	16.4	15.6	17.1	13.4	14.9	**88.6 T**
C379	LW2-C379-C	17.3 T	15.9 T	13.9 T	12.8 T	10.4 T	13.8 T	**84.1 T**
C379	LW2-C379-D	16.9	9.75	5.6	3.35	2.49	5.5	**43.6 T**
C380	LW2-C380-B	5.82	24.3	25.7	17.1	8.72	19.3	**101 T**
C380	LW2-C380-C	5.41	22.6	23.9	15.9	8.11	17.9	**93.8 T**
C382	LW2-C382-B	18.9	16.6	12.3	7.19	4.15	9.13	**68.3 T**
C382	LW2-C382-C	30.2	20.9	9.95	7.65	3.44	9.66	**81.8 T**
C383	LW2-C383-B	0.93	0.83	0.53	0.44	0.34	0.81	**3.88 T**
C383	LW2-C383-C	16.7	21.9	23.4	13.6	7.53	15.1	**98.2 T**
C384	LW2-C384-B	6.46	11	13.1	7.67	7.04	11.1	**56.4 T**
C384	LW2-C384-C	7.15	4.05	2.47	1.43	1.04	2.7	**18.8 T**
C386	LW2-C386-B	12	11.2	10.9	7.15	6.94	5.7	**53.9 T**
C386	LW2-C386-C	0.11	0.11	0.18	0.19	0.06	0.01	**0.66 T**
C388	LW2-C388-B	20.8 T	21.7 T	17.7 T	9.65 T	6.11 T	13.5 T	**89.5 T**
C388	LW2-C388-C	21.6	16.7	21.2	10.7	7.63	18.1	**95.9 T**
C392	LW2-C392-B	15.12	22.2	20.3	13.1	8.05	16.5	**95.3 T**
C392	LW2-C392-C	6.48	5.13	2.34	0.99	0.7	1.52	**17.2 T**
C393	LW2-C393-B	13.5	10.3	5.38	4.19	2.47	5.93	**41.8 T**
C393	LW2-C393-C	9.18	7.93	4.89	2.58	1.37	3.55	**29.5 T**
C396	LW2-C396-B	23.4	25.2	14.6	8.17	3.88	10.9	**86.2 T**
C396	LW2-C396-C	13.7	24.1	20.1	12.8	6.84	14.2	**91.7 T**
C397	LW2-C397-B	17.2	19.7	19.7	12	6.88	10.8	**86.3 T**
C400	LW2-C400-B	17.6	13.8	10.4	6.65	4.23	5.54	**58.2 T**
C400	LW2-C400-C	17.5	17.4	10	7.17	6.14	10.2	**68.4 T**
C400	LW2-C400-D	17	14.6	10.1	6.43	6.06	7.03	**61.2 T**
C401	LW2-C401-B	16.5	11.3	7.43	3.84	2.56	4.48	**46.1 T**
C401	LW2-C401-C	6.57	4.76	3.64	2.2	1.98	3.1	**22.3 T**
C401	LW2-C401-D	4.99	4.68	3.9	2.45	1.96	3.12	**21.1 T**
C401	LW2-C401-E	9.48	12.4	11.2	6.01	4.79	7.42	**51.3 T**
C402	LW2-C402-B	0.94	0.31	0.4	0.31	0.42	0.41	**2.79 T**
C402	LW2-C402-C	7.02	3.26	2.2	1.24	1.09	2.38	**17.2 T**
C403	LW2-C403-B	2.65	1.73	1.37	0.86	0.75	1.28	**8.64 T**
C403	LW2-C403-C	0	0.21	0.23	0.01	0.17	0.15	**0.77 T**
C403	LW2-C403-D	18.5	23.8	15	8.33	3.41	9.54	**78.6 T**
C405	LW2-C405-B	0.61	0.45	0.29	0.34	0.45	0.35	**2.49 T**
C405	LW2-C405-C	6.3	5.48	4.49	3.19	4.05	5.23	**28.7 T**
C409	LW2-C409-B	12.6	15.6	9.32	4.92	2.93	5.68	**51.1 T**
C409	LW2-C409-C	2.82	1.94	1.39	0.99	0.87	1.3	**9.31 T**
C413-1	LW2-C413-B1	15.4	24.8	16.6	10.5	5.7	11	**84 T**
C413-1	LW2-C413-C1	18	20.5	13	9.31	5.44	10.7	**77 T**
C413-2	LW2-C413-B2	19.5	14.1	7.74	5.04	2.8	4.81	**54 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
C413-2	LW2-C413-C2	14.6	25.4	14.1	9.69	6.31	7.94	**78 T**
C413-2	LW2-C413-D2	15.9	20	14.3	9.69	6.32	15.2	**81.4 T**
C415	LW2-C415-B	1.59	1.15	1.03	0.85	0.79	1.31	**6.72 T**
C415	LW2-C415-C	0.45	0.25	0.25	0.14	0.17	0.13	**1.39 T**
C415	LW2-C415-D	20.9	8.96	6.58	2.72	1.77	5.12	**46.1 T**
C417	LW2-C417-B	4.92	25.4	19	17.1	15.9	9.37	**91.7 T**
C417	LW2-C417-D	4.7	3.45	1.9	2.14	1.6	4.06	**17.9 T**
C420	LW2-C420-B	22	12.6	8.15	6.34	2.94	3.98	**56 T**
C420	LW2-C420-C	17.1 T	15.5 T	11 T	6.3 T	3.55 T	9.54 T	**63 T**
C420	LW2-C420-D	2.55	1.49	1.94	1.27	0.679	1.02	**8.95 T**
C421	LW2-C421-B	7.98	11.9	18.5	14.2	14.1	12.2	**78.9 T**
C421	LW2-C421-C	7.1	6.59	11.1	7.16	4.41	7.58	**43.9 T**
C425-1	LW2-C425-B1	3.72 T	3.26 T	2.66 T	1.59 T	1.17 T	2.17 T	**14.6 T**
C425-1	LW2-C425-C1	6.35 T	2.86 T	1.13 T	1.1 T	1.03 T	2.12 T	**14.6 T**
C425-1	LW2-C425-E1	5.02 T	3.43 T	1.54 T	1.31 T	1.02 T	2.07 T	**14.4 T**
C425-2	LW2-C425-B2	4.39	5.89	5.12	3.1	1.93	3.22	**23.7 T**
C425-2	LW2-C425-C2	2.87 T	1.81 T	0.993 T	0.837 T	0.69 T	0.9 T	**8.1 T**
C425-2	LW2-C425-D2	6.87	6.02	5.8	4.32	2.64	5.1	**30.8 T**
C426	LW2-C426-B	10.3	20.5	19.3	12.5	6.36	13.2	**82.2 T**
C426	LW2-C426-C	0.29	0.3	0.34	0.16	0.06	0.27	**1.42 T**
C430	LW2-C430-B	26 T	21.2 T	14.8 T	7.96 T	6.28 JT	7.35 JT	**83.6 JT**
C430	LW2-C430-C	18.2	27.1	20	9.91	5.62	8.3	**89.1 T**
C430	LW2-C430-E	20.7	15.9	13.1	7.99	5.13	8.68	**71.5 T**
C431	LW2-C431-B	18.1	20.6	14.4	7	3.9	8.98	**73 T**
C431	LW2-C431-C	16.1	12	6.45	3.4	2.22	5.98	**46.2 T**
C431	LW2-C431-D	1.57	1.18	0.97	0.36	0.41	0.68	**5.17 T**
C434	LW2-C434-B	11.8	19.3	17	12.4	9.16	13.1	**82.8 T**
C434	LW2-C434-C	0.68	1.28	0.75	0.55	0.46	0.69	**4.41 T**
C434	LW2-C434-D	32.4	21.9	11.2	4.77	2.61	5.58	**78.5 T**
C436	LW2-C436-B	8.08	6.23	3.35	1.76	1.4	1.62	**22.4 T**
C436	LW2-C436-C	15	19.2	17.2	10.2	7.75	16.1	**85.5 T**
C437	LW2-C437-B	5.44	5.31	4.23	2.3	1.62	4.08	**23 T**
C437	LW2-C437-C	0.317 T	0.54 T	0.477 T	0.173 T	0.23 T	0.397 T	**2.13 T**
C437	LW2-C437-D	0.21	0.18	0.17	0.09	0.24	0.25	**1.14 T**
C439	LW2-C439-B	19.6	21	17.6	8.08	4.62	10.2	**81.1 T**
C439	LW2-C439-C	17.7	16	12.3	6.51	3.55	10.5	**66.6 T**
C440	LW2-C440-B	23.5	20.7	17.3	9.93	9.46	8.39	**89.3 T**
C440	LW2-C440-C	17.2	22.4	18.8	10.5	5.54	13.6	**88 T**
C441-1	LW2-C441-B1	14.1	19.3	23.8	9.84	6.82	11.9	**85.8 T**
C441-1	LW2-C441-C1	31.1	18	12.9	5.65	2.78	4.35	**74.8 T**
C441-2	LW2-C441-B2	17.7 T	22.3 T	17.9 T	9.1 T	5.32 T	10.2 T	**82.5 T**
C441-2	LW2-C441-C2	29.3 T	22.1 T	14.5 T	5.62 T	2.84 T	4.78 T	**79.1 T**
C444	LW2-C444-B	18.6	19.9	14.6	8.59	6.07	7.26	**75 T**
C444	LW2-C444-C	14.8	19.6	13.8	9	5.72	8.36	**71.3 T**
C445	LW2-C445-B	17.1	24.7	15.2	8.91	8.06	8.64	**82.6 T**
C445	LW2-C445-C	15.7	18.6	16.2	9.51	6.17	12.7	**78.9 T**
C445	LW2-C445-E	14	22.1	18.2	12.5	7.11	15.2	**89.1 T**
C447	LW2-C447-B	14.3	26.8	13.3	5.59	3.35	6.29	**69.6 T**
C447	LW2-C447-C	16.8	24.9	10.5	4.97	2.05	4.73	**64 T**
C447	LW2-C447-D	2.45	1.91	1.34	0.69	0.59	0.75	**7.73 T**
C448	LW2-C448-B	18.5	26.1	14.6	8.94	6.37	5.95	**80.5 T**
C448	LW2-C448-C	20.3	22.3	15.5	10.2	5.08	8.76	**82.1 T**
C450	LW2-C450-B	22.4	20.7	11.6	8.69	4.99	7.19	**75.6 T**
C450	LW2-C450-C	15.9	17.6	19.5	8.34	8.78	11.9	**82 T**
C453	LW2-C453-B	17.8	20.8	11.4	9	4.38	12.2	**75.6 T**
C453	LW2-C453-C	12.6	20.3	15.6	8.75	7.21	12.4	**76.9 T**
C453	LW2-C453-D	17.3	21.8	14.5	10.5	6.48	12.1	**82.7 T**
C454	LW2-C454-B	2.31	2.6	2.02	1.27	0.94	1.6	**10.7 T**
C454	LW2-C454-C	12.2	18.2	10.9	5.26	3.59	5.61	**55.8 T**
C454	LW2-C454-D	7.33	5.63	3.56	1.91	1.81	3.46	**23.7 T**
C454	LW2-C454-E	1.9	0.66	0.5	0.37	0.53	0.64	**4.6 T**
C455	LW2-C455-B	18.5	18.8	13.3	10.5	7.35	11.3	**79.8 T**
C455	LW2-C455-C	17.6	23.2	14.7	7.75	5.85	12.1	**81.2 T**
C455	LW2-C455-D	17.8	16.6	11.5	6.37	4.11	9.87	**66.3 T**

Table 4-4. Sediment Grain-Size Values Used in Percent Fines Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	Coarse silt	Medium silt	Fine silt	Very fine silt	8-9 Phi clay	>9 Phi clay	Total Fines
C456	LW2-C456-B	23.1 T	24.5 T	13.9 T	8.31 T	4.67 T	9.03 T	**83.5 T**
C456	LW2-C456-C	5.95	11.4	6.68	4.25	2.75	6.46	**37.5 T**
C456	LW2-C456-D	12.1	22.5	15.8	11	5.36	10.6	**77.4 T**
C456	LW2-C456-F	5.07	37.2	12	12.3	7.13	17.3	**91 T**
C457	LW2-C457-B	23	20.9	12.7	8.43	5.67	8.86	**79.6 T**
C457	LW2-C457-C	13.7	12.2	9	6.42	4.58	6.63	**52.5 T**
C457	LW2-C457-E	15.5	17.9	16.6	11.6	8.26	12.4	**82.3 T**
C458-1	LW2-C458-B	21.1 T	19.4 T	13.6 T	8.1 T	5.24 T	8.82 T	**76.3 T**
C458-1	LW2-C458-C	26.3	19.8	14.1	9.68	5.29	5.29	**80.5 T**
C458-2	LW2-C458-B2	22.3 T	19.4 T	12.9 T	6.89 T	5.53 T	7.14 T	**74.2 T**
C458-2	LW2-C458-C2	28.8 T	20.5 T	12.8 T	9.82 T	5.14 T	5.44 T	**82.5 T**
C461	LW2-C461-B	19.5	22.6	13.3	8.12	5.14	8.31	**77 T**
C461	LW2-C461-C	25.3	22.6	14.7	9.48	4.65	7.05	**83.8 T**
C462	LW2-C462-B	26.5	20.1	14.9	7.15	7.77	7.04	**83.5 T**
C462	LW2-C462-C	21.1	17.8	13.6	8.98	4.75	7.6	**73.8 T**
C468	LW2-C468-B	19.7 T	20.6 T	12.8 T	7.66 T	5.24 T	8.31 T	**74.3 T**
C468	LW2-C468-C	20.1	21.3	14.8	11.2	6.29	9.95	**83.6 T**
C471	LW2-C471-B	31.4	16.4	11.8	7.5	4.77	5.47	**77.3 T**
C471	LW2-C471-C	18.5	15.1	9.33	7.81	3.89	3.37	**58 T**
C471	LW2-C471-D	23.2	17.2	9.73	8.11	4.81	6.61	**69.7 T**
C474	LW2-C474-B	25.6	18.9	9.79	6.89	4	5.99	**71.2 T**
C474	LW2-C474-C	23.3	18.1	17.8	5.08	5.53	4.87	**74.7 T**
C477	LW2-C477-B	20.4	20.6	12.8	7.37	4.26	10.9	**76.3 T**
C477	LW2-C477-C	6.45	5.4	2.76	2.69	1.48	3.91	**22.7 T**
C494	LW2-C494-B	31.8	13.1	5.27	2.72	1.84	4.59	**59.3 T**
C494	LW2-C494-C	29.4	18.6	8.1	4.48	2.74	6.16	**69.5 T**
C494	LW2-C494-D	12.6	10.1	5.54	4.1	3.07	4.04	**39.5 T**
C494	LW2-C494-E	9.56	12.3	10.1	6.93	4.64	6.82	**50.4 T**
C521	LW2-C521-B	10.5	14.1	10.7	8.68	7.27	6.67	**57.9 T**
C521	LW2-C521-C	2.57	3.94	4.56	2.8	1.64	3.26	**18.8 T**
C521	LW2-C521-E	0.4	0.14	0.17	0.16	0.09	0.09	**1.05 T**

Notes:

J The associated numerical value is an estimated quantity.

T The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	12674-11-2	53469-21-9	12672-29-6	11097-69-1	11096-82-5	37324-23-5	11100-14-4	11104-28-2	11141-16-5	Total
	Chemical Name	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclors
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID										
Beach Sediment Samples											
B001	LW2-B001	1.3 U	1.3 U	1.7 U	0.78 U	1 U	1.2 U	1 U	2.4 U	2.1 U	**2.4 UT**
B002	LW2-B002	12 U	13 U	140	25 UJ	25 UJ	25 UJ	9.9 U	23 U	21 U	**140 T**
B003	LW2-B003	1.3 U	1.3 U	1.7 U	0.8 U	1 U	1.2 U	1.1 U	2.4 U	2.2 U	**2.4 UT**
B004	LW2-B004	85 U	87 U	1400	170 UJ	170 UJ	170 UJ	68 U	160 U	140 U	**1400 T**
B005	LW2-B005	1.2 U	1.2 U	1.6 U	0.73 U	0.94 U	1.1 U	0.96 U	2.2 U	2 U	**2.2 UT**
B006	LW2-B006	1.2 U	1.2 U	15	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.2 U	2 U	**15 T**
B007	LW2-B007	1.3 U	1.3 U	1.7 U	0.78 U	1 U	1.2 U	1 U	2.4 U	2.1 U	**2.4 UT**
B008	LW2-B008	1.1 U	1.1 U	1.4 U	0.64 U	4.4	0.99 U	0.85 U	2 U	1.8 U	**4.4 T**
B009	LW2-B009	1.1 U	1.1 U	1.5 U	0.68 U	0.88 U	1.1 U	0.9 U	2.1 U	1.9 U	**2.1 UT**
B010	LW2-B010	1.3 U	1.3 U	1.7 U	0.8 U	27	1.2 U	1.1 U	2.4 U	2.2 U	**27 T**
B011	LW2-B011	1.1 U	1.1 U	1.4 U	0.65 U	0.83 U	0.99 U	0.85 U	2 U	1.8 U	**2 UT**
B012	LW2-B012	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	**2.3 UJT**
B015	LW2-B015	1.1 U	1.1 U	1.4 U	0.64 U	0.82 U	0.98 U	0.84 U	1.9 U	1.8 U	**1.9 UT**
B016	LW2-B016	1.1 U	1.2 U	1.5 U	0.69 U	0.89 U	1.1 U	0.91 U	2.1 U	1.9 U	**2.1 UT**
B017	LW2-B017	1.2 U	1.2 U	1.6 U	0.73 U	0.94 U	1.1 U	0.97 U	2.2 U	2 U	**2.2 UT**
B018	LW2-B018	23 U	23 U	30 U	14 U	88	21 U	18 U	42 U	38 U	**88 T**
B019	LW2-B019	1.1 U	1.2 U	1.5 U	0.69 U	0.89 U	1.1 U	0.91 U	2.1 U	1.9 U	**2.1 UT**
B020	LW2-B020	2.5 U	2.5 U	3.2 U	1.5 U	29	2.3 U	2 U	4.6 U	4.1 U	**29 T**
B021	LW2-B021	3.1 U	3.2 U	4.1 U	70	11	2.9 U	2.5 U	5.8 U	5.2 U	**81 T**
B022-1	LW2-B022-1	2.7 U	2.7 U	8.7	1.6 U	110	2.5 U	2.1 U	4.9 U	4.5 U	**119 T**
B022-2	LW2-B022-2	5.4 U	5.5 U	16 J	3.3 U	55	5 U	4.3 U	10 U	9 U	**71 JT**
B023	LW2-B023	1.1 U	1.1 U	1.4 U	0.67 U	32	1 U	0.89 U	2 U	1.8 U	**32 T**
B024	LW2-B024	3.8 U	3.8 U	37	2.3 U	36	3.5 U	3 U	7 U	6.3 U	**73 T**
B025-1	LW2-B025-1	3.4 UT	3.4 UT	4.4 UT	78 T	30.5 T	3.2 UT	2.7 UT	6.3 UT	5.7 UT	**109 T**
B025-2	LW2-B025-2	2.3 U	2.3 U	2.9 U	54 J	22 J	2.1 U	1.8 U	4.2 U	3.8 U	**76 JT**
B026	LW2-B026	15 U	15 U	82	9.1 U	240	14 U	12 U	28 U	25 U	**322 T**
B050	LW2-B050	4.34 U	4.42 U	5.66 U	2.64 U	64.5	4.06 U	3.48 U	8.04 U	7.26 U	**64.5 T**
Surface Interval Sediment Samples											
C093	LW2-C093-A	40.6 UJ	41.3 UJ	221 J	2010 J	31.7 UJ	38 UJ	32.6 UJ	75.3 UJ	68 UJ	**2230 JT**
D1-1	LW2-D1-1	2.11 UT	2.14 UT	4.17 JT	7.5 JT	6.1 JT	1.97 UT	1.69 UT	3.91 UT	3.53 UT	**17.8 JT**
D1-2	LW2-D1-2	2.29 U	2.33 U	2.98 U	6.12	3.71 J	2.14 U	1.84 U	4.24 U	3.83 U	**9.83 JT**
D2	LW2-D2	1.6 U	1.63 U	2.09 U	9.08	2.65 J	1.5 U	1.29 U	2.97 U	2.68 U	**11.7 JT**
G001	LW2-G001	2.1 U	2.1 U	3 J	1.3 U	6.5	1.9 U	1.7 U	3.8 U	3.4 U	**9.5 JT**
G002	LW2-G002	4.7 UJ	4.7 UJ	4.7 UJ	4.7 UJ	4.7 UJ	4.7 UJ	4.7 UJ	4.7 UJ	4.7 UJ	**4.7 UJT**
G003	LW2-G003	4.5 UJ	4.5 UJ	4.5 UJ	4.5 UJ	5.3 J	4.5 UJ	4.5 UJ	4.5 UJ	4.5 UJ	**5.3 JT**
G004	LW2-G004	3.9 U	4 U	36	2.4 U	16	3.6 U	3.1 U	7.2 U	6.5 U	**52 T**
G005	LW2-G005	5.1 UJ	5.1 UJ	5.1 UJ	5.1 UJ	5.9 J	5.1 UJ	5.1 UJ	5.1 UJ	5.1 UJ	**5.9 JT**
G006	LW2-G006	5.1 UJ	5.1 UJ	5.1 UJ	5.1 UJ	11 J	5.1 UJ	5.1 UJ	5.1 UJ	5.1 UJ	**11 JT**
G007-1	LW2-G007-1	7.7 UT	8 UT	200 JT	5.1 UT	70.5 JT	7.6 UT	6.3 UT	15 UT	13 UT	**271 JT**
G007-2	LW2-G007-2	6.2 U	6.6 U	320 J	4.1 U	62	6.2 U	5.1 U	12 U	11 U	**382 JT**
G008	LW2-G008	5 UJ	5 UJ	5 UJ	5 UJ	9.1 J	5 UJ	5 UJ	5 UJ	5 UJ	**9.1 JT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	12674-11-2 Aroclor 1016 ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
Location	**Sample ID**										
G009	LW2-G009	71 U	73 U	1400	43 U	360	67 U	57 U	130 U	120 U	**1760 T**
G010	LW2-G010	14 U	14 U	120	8.6 U	48 J	13 U	11 U	26 U	24 U	**168 JT**
G011	LW2-G011	66 U	67 U	1300	40 U	360 J	61 U	53 U	120 U	110 U	**1660 JT**
G012	LW2-G012	2 U	2.1 U	2.7 U	1.3 U	7.7 J	1.9 U	1.6 U	3.8 U	3.4 U	**7.7 JT**
G013	LW2-G013	4.6 U	4.8 U	74 J	3 U	24	4.5 U	3.8 U	8.9 U	8.1 U	**98 JT**
G014	LW2-G014	2.4 U	2.5 U	7.4 J	1.6 U	9.2 J	2.4 U	2 U	4.7 U	4.2 U	**16.6 JT**
G015	LW2-G015	68 U	69 U	1400	41 U	350	63 U	54 U	130 U	110 U	**1750 T**
G016	LW2-G016	4.9 UJ	4.9 UJ	4.9 UJ	4.9 UJ	10 J	4.9 UJ	4.9 UJ	4.9 UJ	4.9 UJ	**10 JT**
G017	LW2-G017	21 U	21 U	550	13 U	200	20 U	17 U	39 U	35 U	**750 T**
G018	LW2-G018	4.6 U	4.7 U	6 U	2.8 U	51	4.3 U	3.7 U	8.6 U	7.7 U	**51 T**
G019	LW2-G019	36 U	37 U	800	22 U	730	73 UJ	73 UJ	67 U	61 U	**1530 T**
G020	LW2-G020	21 U	22 U	360	13 U	80	20 U	17 U	39 U	36 U	**440 T**
G021	LW2-G021	2.4 U	2.5 U	8.2	1.5 U	7.2 J	2.3 U	1.9 U	4.5 U	4 U	**15.4 JT**
G022	LW2-G022	2.4 U	2.4 U	3.8 J	1.4 U	8.1 J	2.2 U	4.8 UJ	4.4 U	4.8 UJ	**11.9 JT**
G023-1	LW2-G023-1	2.8 UJT	2.8 UJT	2.8 UJT	2.8 UJT	2.8 UJT	2.8 UJT	2.8 UJT	2.8 UJT	2.8 UJT	**2.8 UJT**
G023-2	LW2-G023-2	3.1 UJ	3.1 UJ	3.1 UJ	3.1 UJ	3.1 UJ	3.1 UJ	3.1 UJ	3.1 UJ	3.1 UJ	**3.1 UJT**
G024	LW2-G024	4.5 U	4.6 U	68	2.8 U	21	4.2 U	3.6 U	8.4 U	7.6 U	**89 T**
G025	LW2-G025	25 U	26 U	380	15 U	52	23 U	20 U	47 U	42 U	**432 T**
G026	LW2-G026	2.2 U	2.2 U	39	1.4 U	19	2.1 U	1.8 U	4.2 U	3.8 U	**58 T**
G027	LW2-G027	4 U	4.1 U	97	2.4 U	14	3.8 U	3.2 U	7.4 U	6.7 U	**111 T**
G028	LW2-G028	5.7 U	5.8 U	72	3.5 U	15	5.3 U	4.6 U	11 U	9.6 U	**87 T**
G029	LW2-G029	1.7 U	1.8 U	2.3 U	1.1 U	1.5 J	1.6 U	1.4 U	3.2 U	2.9 U	**1.5 JT**
G030	LW2-G030	4.8 UJ	4.8 UJ	4.8 UJ	4.8 UJ	4.8 UJ	4.8 UJ	4.8 UJ	4.8 UJ	4.8 UJ	**4.8 UJT**
G031	LW2-G031	3.8 U	3.9 U	55	2.3 U	18	3.5 U	3 U	7 U	6.3 U	**73 T**
G032	LW2-G032	2.5 U	2.6 U	36	1.5 U	5.5	2.4 U	2 U	4.7 U	4.2 U	**41.5 T**
G033	LW2-G033	3.2 U	3.3 U	34	2 U	11	3 U	2.6 U	6 U	5.4 U	**45 T**
G034	LW2-G034	1.3 U	1.3 U	31 J	0.77 U	12	1.2 U	1 U	2.3 U	2.1 U	**43 JT**
G035	LW2-G035	3.9 U	3.9 U	54 J	2.3 U	20 J	3.6 U	3.1 U	7.1 U	6.5 U	**74 JT**
G036	LW2-G036	2.4 U	2.5 U	3.2 U	1.5 U	6	2.3 U	2 U	4.5 U	4.1 U	**6 T**
G037	LW2-G037	1.3 U	1.3 U	1.6 U	0.76 U	0.98 U	1.2 U	1 U	2.3 U	2.1 U	**2.3 UT**
G038	LW2-G038	1.49 U	120	1.94 U	38.9	3.83	1.39 U	1.19 U	2.76 U	2.49 U	**163 T**
G039	LW2-G039	4.5 UJ	4.5 UJ	4.5 UJ	4.5 UJ	9 J	4.5 UJ	4.5 UJ	4.5 UJ	4.5 UJ	**9 JT**
G040	LW2-G040	1.2 U	1.2 U	2.4 UJ	2.4 UJ	17	2.4 UJ	0.98 U	2.3 U	2 U	**17 T**
G041	LW2-G041	3.4 UJ	3.4 UJ	3.4 UJ	3.4 UJ	12	3.4 UJ	1.4 U	3.1 U	2.8 U	**12 T**
G042	LW2-G042	4.3 UJ	4.3 UJ	4.3 UJ	4.3 UJ	7.3 J	4.3 UJ	1.7 U	4 U	4.3 UJ	**7.3 JT**
G043	LW2-G043	2.3 U	2.4 U	3.7	1.4 U	9.2	2.2 U	1.9 U	4.3 U	3.9 U	**12.9 T**
G044-1	LW2-G044-1	2.2 UT	2.2 UT	8.5 JT	1.3 UT	9.3 T	2 UT	1.7 UT	4 UT	3.6 UT	**17.8 JT**
G044-2	LW2-G044-2	2.3 U	2.3 U	8.6 J	1.4 U	12 J	2.1 U	1.8 U	4.2 U	3.8 U	**20.6 JT**
G045	LW2-G045	1.3 U	1.3 U	1.6 U	0.76 U	0.98 U	1.2 U	1 U	2.3 U	2.1 U	**2.3 UT**
G046	LW2-G046	2.3 U	2.4 U	11 J	1.4 U	12 J	2.2 U	1.9 U	4.3 U	3.9 U	**23 JT**
G047	LW2-G047	1.3 U	1.3 U	1.7 U	0.78 U	1 U	1.2 U	1 U	2.4 U	2.2 U	**2.4 UT**
G048	LW2-G048	1.3 U	1.3 U	1.7 U	0.77 U	0.99 U	1.2 U	1 U	2.4 U	2.1 U	**2.4 UT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	12674-11-2	53469-21-9	12672-29-6	11097-69-1	11096-82-5	37324-23-5	11100-14-4	11104-28-2	11141-16-5	Total
	Chemical Name	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclors
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID										
G049	LW2-G049	1.3 U	1.3 U	1.6 U	0.77 U	0.98 U	1.2 U	1 U	2.3 U	2.1 U	**2.3 UT**
G050	LW2-G050	1.7 U	1.7 U	2.2 U	1 U	1.3 U	1.6 U	1.4 U	3.1 U	2.8 U	**3.1 UT**
G051	LW2-G051	2.1 U	2.2 U	8.3	1.3 U	13	2 U	1.7 U	4 U	3.6 U	**21.3 T**
G052	LW2-G052	1.2 U	1.3 U	1.6 U	0.76 U	0.97 U	1.2 U	1 U	2.3 U	2.1 U	**2.3 UT**
G053	LW2-G053	1.3 U	1.3 U	7.5	0.77 U	11	1.2 U	1 U	2.3 U	2.1 U	**18.5 T**
G054	LW2-G054	1.3 U	1.4 U	1.7 U	0.81 U	2.4 J	1.2 U	1.1 U	2.5 U	2.2 U	**2.4 JT**
G055	LW2-G055	1.8 U	1.8 U	3.9	1.1 U	12	1.7 U	1.4 U	3.3 U	3 U	**15.9 T**
G056	LW2-G056	1.4 U	1.4 U	1.8 U	0.83 U	1.1 U	1.3 U	1.1 U	2.5 U	2.3 U	**2.5 UT**
G057	LW2-G057	1.7 U	1.7 U	15 J	1 U	8.8 J	1.6 U	1.3 U	3.1 U	2.8 U	**23.8 JT**
G058	LW2-G058	1.5 U	1.5 U	7.5	0.9 U	13 J	1.4 U	1.2 U	2.7 U	2.5 U	**20.5 JT**
G059	LW2-G059	1.2 U	1.3 U	1.6 U	0.76 U	4.8	1.2 U	1 U	2.3 U	2.1 U	**4.8 T**
G060	LW2-G060	2.6 UJ	2.6 UJ	2.6 UJ	2.6 UJ	2.6 UJ	2.6 UJ	2.6 UJ	2.6 UJ	2.6 UJ	**2.6 UJT**
G061	LW2-G061	1.7 U	1.7 U	5.4	1 U	8	1.6 U	1.4 U	3.2 U	2.9 U	**13.4 T**
G062	LW2-G062	1.3 U	1.3 U	1.7 U	0.78 U	9.2	1.2 U	1 U	2.4 U	2.2 U	**9.2 T**
G063	LW2-G063	2.2 U	2.2 U	4.3 J	1.3 U	5.6 J	2 U	1.7 U	4 U	3.6 U	**9.9 JT**
G064	LW2-G064	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	**2.9 UJT**
G065	LW2-G065	1.8 U	3.5 UJ	10 J	1.1 U	7.6	1.7 U	1.4 U	3.3 U	3.5 UJ	**17.6 JT**
G066	LW2-G066	1.7 U	1.8 U	3.5 UJ	3.5 UJ	9.8 J	3.5 UJ	1.4 U	3.2 U	2.9 U	**9.8 JT**
G067	LW2-G067	1.7 U	1.7 U	9.2 J	1 U	23	1.6 U	1.4 U	3.1 U	2.8 U	**32.2 JT**
G068	LW2-G068	2.1 U	4.2 UJ	9.7 J	1.3 U	11	1.9 U	1.7 U	3.8 U	4.2 UJ	**20.7 JT**
G069	LW2-G069	1.7 U	1.8 U	4.5 J	1.1 U	5.2 J	1.6 U	1.4 U	3.2 U	2.9 U	**9.7 JT**
G070	LW2-G070	2.2 U	2.2 U	2.9 U	1.3 U	5.7	2 U	1.8 U	4.1 U	3.7 U	**5.7 T**
G071	LW2-G071	4 U	4.1 U	5.3 U	2.5 U	52	3.8 U	3.2 U	7.5 U	6.8 U	**52 T**
G072	LW2-G072	2.1 U	2.2 U	2.8 U	1.3 U	6.7	2 U	1.7 U	3.9 U	3.6 U	**6.7 T**
G073	LW2-G073	3.9 U	3.9 U	5 U	2.4 U	10	3.6 U	3.1 U	7.2 U	6.5 U	**10 T**
G074	LW2-G074	6.3 U	6.4 U	8.3 U	3.9 U	4.9 U	5.9 U	5.1 U	12 U	11 U	**12 UT**
G075-1	LW2-G075-1	5.7 UJ	5.7 UJ	5.7 UJ	5.7 UJ	5.7 UJ	5.7 UJ	5.7 UJ	5.7 UJ	5.7 UJ	**5.7 UJT**
G075-2	LW2-G075-2	6.3 UJ	6.3 UJ	6.3 UJ	6.3 UJ	6.3 UJ	6.3 UJ	6.3 UJ	6.3 UJ	6.3 UJ	**6.3 UJT**
G076	LW2-G076	2.1 U	2.2 U	2.8 U	1.3 U	9.3 J	2 U	1.7 U	3.9 U	3.5 U	**9.3 JT**
G077	LW2-G077	2 U	2.1 U	5 J	1.2 U	7.6 J	1.9 U	1.6 U	3.7 U	3.4 U	**12.6 JT**
G078	LW2-G078	1.2 U	1.3 U	1.6 U	0.75 U	18	1.2 U	0.99 U	2.3 U	2.1 U	**18 T**
G079	LW2-G079	1.4 U	1.4 U	1.8 U	0.84 U	1.1 U	1.3 U	1.1 U	2.5 U	2.3 U	**2.5 UT**
G080	LW2-G080	2.5 U	2.5 U	10	35	12	2.3 U	2 U	4.6 U	4.1 U	**57 T**
G081	LW2-G081	2.1 U	2.1 U	5.5 J	1.3 U	10	1.9 U	1.7 U	3.8 U	3.4 U	**15.5 JT**
G082	LW2-G082	13 UJ	13 UJ	13 UJ	3.8 U	150 J	5.9 U	5 U	13 UJ	13 UJ	**150 JT**
G083	LW2-G083	3.1 U	3.2 U	29	1.9 U	40	2.9 U	2.5 U	5.8 U	5.3 U	**69 T**
G084	LW2-G084	4.4 U	4.4 U	32 J	130 J	52	4.1 U	3.5 U	8.1 U	7.3 U	**214 JT**
G085	LW2-G085	36 U	36 U	47 U	1700	28 U	33 U	29 U	66 U	60 U	**1700 T**
G086	LW2-G086	5.2 U	5.3 U	50	97 J	56 J	4.8 U	4.1 U	9.6 U	8.7 U	**203 JT**
G087	LW2-G087	8.3 U	8.4 U	100	170 J	83	7.7 U	6.6 U	15 U	14 U	**353 JT**
G088	LW2-G088	15 UJ	15 UJ	38 J	130 J	60 J	15 UJ	15 UJ	15 UJ	15 UJ	**228 JT**
G089	LW2-G089	5 U	5.1 U	6.6 U	200	47	4.7 U	4 U	9.3 U	8.4 U	**247 T**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	12674-11-2 Aroclor 1016 ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
Location	**Sample ID**										
G090	LW2-G090	19 U	290	24 U	300 J	160 J	17 U	15 U	34 U	31 U	**750 JT**
G091	LW2-G091	3.7 U	3.8 U	44	96 J	70 J	3.5 U	3 U	6.9 U	6.3 U	**210 JT**
G092	LW2-G092	29 U	30 U	38 U	1500	23 U	27 U	23 U	54 U	49 U	**1500 T**
G093	LW2-G093	39.6 U	40.3 U	627	2100	638	37 U	31.8 U	73.4 U	66.3 U	**3370 T**
G094	LW2-G094	17.3 U	17.6 U	231	880	336	16.1 U	13.8 U	32 U	28.9 U	**1450 T**
G095	LW2-G095	1.3 U	1.3 U	1.7 U	0.8 U	5.3	1.2 U	1.1 U	2.4 U	2.2 U	**5.3 T**
G096	LW2-G096	4.8 U	22	6.3 U	240	3.8 U	4.5 U	40	9 U	8.1 U	**302 T**
G097	LW2-G097	1.9 U	1.9 U	5.9	1.1 U	12	1.8 U	1.5 U	3.5 U	3.1 U	**17.9 T**
G098	LW2-G098	1.8 U	1.9 U	10	1.1 U	7.4 J	1.7 U	1.5 U	3.4 U	3.1 U	**17.4 JT**
G099	LW2-G099	6.5 U	6.6 U	66 J	170	58 J	6.1 U	5.2 U	12 U	11 U	**294 JT**
G100	LW2-G100	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	16	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	**16 T**
G101	LW2-G101	2 U	2.1 U	11	1.2 U	10 J	1.9 U	1.6 U	3.8 U	3.4 U	**21 JT**
G102	LW2-G102	1.2 U	1.3 U	1.6 U	0.75 U	0.97 U	1.2 U	0.99 U	2.3 U	2.1 U	**2.3 UT**
G103	LW2-G103	1.8 U	1.8 U	18 J	52	34 J	1.7 U	1.4 U	3.3 U	3 U	**104 JT**
G104	LW2-G104	1.8 U	15	2.3 U	15	1.4 U	1.7 U	1.4 U	3.3 U	3 U	**30 T**
G105	LW2-G105	1.8 U	1.8 U	4.2	1.1 U	8.3	1.7 U	1.4 U	3.3 U	3 U	**12.5 T**
G106	LW2-G106	12 U	110	15 U	94	32 J	11 U	9.3 U	21 U	19 U	**236 JT**
G107	LW2-G107	1.7 U	1.7 U	9.4	1 U	8.1	1.5 U	1.3 U	3.1 U	2.8 U	**17.5 T**
G108	LW2-G108	2 U	4 UJ	13	1.2 U	4.9	1.9 U	1.6 U	3.7 U	4 UJ	**17.9 T**
G109	LW2-G109	8.6 U	110	11 U	76	21 J	8 U	6.9 U	16 U	14 U	**207 JT**
G110	LW2-G110	2.2 U	2.2 U	2.9 U	1.3 U	4 J	2.1 U	1.8 U	4.1 U	3.7 U	**4 JT**
G111	LW2-G111	51 U	1200	66 U	330	40 U	47 U	41 U	94 U	85 U	**1530 T**
G112	LW2-G112	13 U	170	17 U	83	10 U	12 U	55	25 U	22 U	**308 T**
G113	LW2-G113	2.2 U	2.3 U	2.9 U	1.4 U	6.7 J	2.1 U	1.8 U	4.1 U	3.7 U	**6.7 JT**
G116	LW2-G116	2.1 U	2.1 U	5.2 J	1.3 U	16	2 U	1.7 U	3.9 U	3.5 U	**21.2 JT**
G117	LW2-G117	1.7 U	1.8 U	3.8 J	1.1 U	9.7	1.6 U	1.4 U	3.2 U	2.9 U	**13.5 JT**
G119	LW2-G119	1.4 U	1.5 U	1.9 U	0.87 U	1.1 U	1.3 U	1.2 U	2.7 U	2.4 U	**2.7 UT**
G120	LW2-G120	2.3 U	2.3 U	3.5 J	1.4 U	9.5 J	2.1 U	1.8 U	4.2 U	3.8 U	**13 JT**
G121	LW2-G121	2.1 U	2.1 U	3.8 J	1.3 U	9.5 J	1.9 U	1.7 U	3.8 U	3.5 U	**13.3 JT**
G122	LW2-G122	2.1 U	2.1 U	2.7 U	1.3 U	6.3	2 U	1.7 U	3.9 U	3.5 U	**6.3 T**
G123	LW2-G123	1.68 U	1.71 U	2.19 U	1.02 U	1.31 U	1.57 U	1.34 U	3.11 U	2.81 U	**3.11 UT**
G124	LW2-G124	1.35 U	1.37 U	1.76 U	13.9 J	5.14	1.26 U	1.08 U	2.5 U	2.26 U	**19 JT**
G125	LW2-G125	2.2 U	2.3 U	2.9 U	1.3 U	16	2.1 U	1.8 U	4.1 U	3.7 U	**16 T**
G126	LW2-G126	1.33 U	1.35 U	1.74 U	0.809 U	1.04 U	1.24 U	1.07 U	2.47 U	2.23 U	**2.47 UT**
G127	LW2-G127	1.8 U	1.9 U	2.6 J	1.1 U	9.6 J	1.7 U	1.5 U	3.4 U	3.1 U	**12.2 JT**
G128	LW2-G128	1.7 U	1.7 U	2.2 U	1 U	4.2 J	1.6 U	1.3 U	3.1 U	2.8 U	**4.2 JT**
G129	LW2-G129	2.2 U	2.2 U	2.8 U	1.3 U	5.7	2 U	1.7 U	4 U	3.6 U	**5.7 T**
G130	LW2-G130	1.4 U	1.5 U	1.9 U	0.87 U	31	1.3 U	1.2 U	2.7 U	2.4 U	**31 T**
G131	LW2-G131	2.3 U	2.4 U	3.1 U	4.7 UJ	4.7 UJ	4.7 UJ	1.9 U	4.3 U	3.9 U	**4.7 UJT**
G132	LW2-G132	1.7 U	1.7 U	2.2 U	1 U	5.3	1.6 U	1.4 U	3.1 U	2.8 U	**5.3 T**
G133	LW2-G133	2.1 U	2.1 U	2.7 U	1.3 U	5.4	2 U	1.7 U	3.9 U	3.5 U	**5.4 T**
G134	LW2-G134	2.4 U	2.5 U	3.2 U	1.5 U	5.5 J	2.3 U	1.9 U	4.5 U	4 U	**5.5 JT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	**12674-11-2**	**53469-21-9**	**12672-29-6**	**11097-69-1**	**11096-82-5**	**37324-23-5**	**11100-14-4**	**11104-28-2**	**11141-16-5**	**Total**
	Chemical Name	**Aroclor 1016**	**Aroclor 1242**	**Aroclor 1248**	**Aroclor 1254**	**Aroclor 1260**	**Aroclor 1262**	**Aroclor 1268**	**Aroclor 1221**	**Aroclor 1232**	**Aroclors**
	Unit	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
Location	**Sample ID**										
G135	LW2-G135	2.1 U	2.2 U	2.8 U	1.3 U	8	2 U	1.7 U	3.9 U	3.6 U	**8 T**
G136	LW2-G136	2.4 U	2.4 U	3.1 U	27 J	17 J	2.2 U	1.9 U	4.4 U	4 U	**44 JT**
G137	LW2-G137	2.4 U	2.4 U	3.1 U	1.4 U	7.4 J	2.2 U	1.9 U	4.4 U	4 U	**7.4 JT**
G138	LW2-G138	1.5 U	1.6 U	2 U	0.94 U	1.2 U	1.4 U	1.2 U	2.9 U	2.6 U	**2.9 UT**
G139	LW2-G139	3.6 UJ	3.6 UJ	3.6 UJ	21 J	3.6 UJ	3.6 UJ	3.6 UJ	3.6 UJ	3.6 UJ	**21 JT**
G140-1	LW2-G140-1	2.9 UJT	2.9 UJT	25 JT	1.8 UJT	19.5 JT	2.8 UJT	2.4 UJT	2.9 UJT	2.9 UJT	**44.5 JT**
G140-1	LW2-G140-2	1.3 U	1.3 U	1.7 U	2.6 UJ	1 U	1.2 U	1 U	2.4 U	2.2 U	**2.6 UJT**
G141	LW2-G141	1.7 U	1.8 U	2.2 U	1 U	3.6	1.6 U	1.4 U	3.2 U	2.9 U	**3.6 T**
G142	LW2-G142	1.6 U	1.6 U	2.1 U	13 J	3.2 UJ	3.2 UJ	1.3 U	2.9 U	2.6 U	**13 JT**
G143	LW2-G143	1.8 U	1.8 U	7.3 J	29	1.4 U	1.7 U	1.4 U	3.3 U	3 U	**36.3 JT**
G146	LW2-G146	1.3 U	1.3 U	1.7 U	0.78 U	1 U	1.2 U	1 UJ	2.4 U	2.2 U	**2.4 UT**
G147	LW2-G147	1.4 U	1.4 U	1.8 U	10	5.1	1.3 U	1.1 U	2.5 U	2.3 U	**15.1 T**
G149	LW2-G149	1.6 U	1.7 U	2.1 U	8.5 J	4.1	1.5 U	1.3 U	3 U	2.7 U	**12.6 JT**
G150	LW2-G150	2.1 U	2.1 U	2.7 U	15	1.6 U	1.9 U	1.7 UJ	3.9 U	3.5 U	**15 T**
G153	LW2-G153	2 U	2 U	2.6 U	9.5 J	9.6 J	1.9 U	1.6 UJ	3.7 U	3.4 U	**19.1 JT**
G154	LW2-G154	2.1 U	2.1 U	4.2 UJ	4.2 UJ	4.2 UJ	2 U	1.7 UJ	3.9 U	3.5 U	**4.2 UJT**
G155	LW2-G155	1.78 U	1.81 U	2.32 U	1.08 U	1.39 U	1.66 U	1.43 U	3.3 U	2.98 U	**3.3 UT**
G157	LW2-G157	1.38 U	1.41 U	1.8 U	0.84 U	1.08 U	1.29 U	1.11 U	2.56 U	2.31 U	**2.56 UT**
G159	LW2-G159	1.3 U	1.3 U	1.6 U	31 J	10	1.2 U	1 U	2.3 U	2.1 U	**41 JT**
G160	LW2-G160	1.35 U	1.37 U	1.76 U	0.821 U	1.05 U	1.26 U	1.08 U	2.5 U	2.26 U	**2.5 UT**
G161	LW2-G161	1.31 U	1.34 U	1.71 U	0.798 U	1.02 U	1.23 U	1.05 U	2.43 U	2.2 U	**2.43 UT**
G163	LW2-G163	1.22 U	1.24 U	1.59 U	0.741 U	0.95 U	1.14 U	0.977 U	2.26 U	2.04 U	**2.26 UT**
G164	LW2-G164	1.2 U	1.2 U	1.6 U	0.74 U	1.3 J	1.1 U	0.98 U	2.3 U	2 U	**1.3 JT**
G165	LW2-G165	2 U	2 U	2.6 U	8.5 J	5.3 J	1.8 U	1.6 UJ	3.6 U	3.3 U	**13.8 JT**
G166	LW2-G166	1.44 U	1.46 U	1.88 U	0.874 U	1.12 U	1.34 U	1.15 U	2.66 U	2.41 U	**2.66 UT**
G168	LW2-G168	1.6 U	1.6 U	2.1 U	13 J	7 J	1.5 U	1.3 U	3 U	2.7 U	**20 JT**
G170	LW2-G170	1.5 U	1.5 U	1.9 U	2.9 UJ	2.1 J	1.4 U	1.2 U	2.7 U	2.5 U	**2.1 JT**
G172	LW2-G172	2.2 U	2.2 U	2.9 U	5.7 J	4.7 J	2.1 U	1.8 U	4.1 U	3.7 U	**10.4 JT**
G175	LW2-G175	1.6 U	1.6 U	2.1 U	3.2 UJ	7.4 J	3.2 UJ	1.3 UJ	3 U	2.7 U	**7.4 JT**
G176	LW2-G176	1.2 U	1.2 U	1.6 U	0.75 U	0.96 U	1.1 U	0.99 U	2.3 U	2.1 U	**2.3 UT**
G178	LW2-G178	1.4 U	1.4 U	1.8 U	0.84 U	3.6	1.3 U	1.1 U	2.5 U	2.3 U	**3.6 T**
G179	LW2-G179	1.4 U	1.4 U	1.9 U	2.9 UJ	2.9 UJ	2.9 UJ	1.1 U	2.6 U	2.4 U	**2.9 UJT**
G180	LW2-G180	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	**2.5 UJT**
G181	LW2-G181	2.1 U	2.1 U	2.7 U	1.2 U	7.9	1.9 U	1.6 UJ	3.8 U	3.4 U	**7.9 T**
G182	LW2-G182	1.2 U	1.3 U	1.6 U	0.76 U	2.5 UJ	1.2 U	1 U	2.3 U	2.1 U	**2.5 UJT**
G183	LW2-G183	1.3 U	1.3 U	1.7 U	0.78 U	1 U	1.2 U	1 U	2.4 U	2.1 U	**2.4 UT**
G184	LW2-G184	2.7 U	34	3.6 U	9.3 J	2.1 U	2.6 U	2.2 U	5.1 U	4.6 U	**43.3 JT**
G186	LW2-G186	1.3 U	1.3 U	1.7 U	0.78 U	1 U	1.2 U	4.7 J	2.4 U	2.1 U	**4.7 JT**
G187	LW2-G187	1.5 U	1.5 U	1.9 U	2.9 UJ	2.9 UJ	2.9 UJ	2.9 UJ	2.7 U	2.5 U	**2.9 UJT**
G188	LW2-G188	2.1 U	2.1 U	2.7 U	11 J	12 J	1.9 U	1.7 UJ	3.8 U	3.5 U	**23 JT**
G189	LW2-G189	1.9 U	1.9 U	2.5 U	10	8.3	1.8 U	3.8 UJ	3.5 U	3.2 U	**18.3 T**
G190	LW2-G190	1.8 U	1.8 U	2.3 U	3.5 UJ	3.5 UJ	3.5 UJ	1.4 UJ	3.2 U	2.9 U	**3.5 UJT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	12674-11-2 Aroclor 1016 ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
Location	Sample ID										
G191	LW2-G191	1.2 U	1.2 U	1.6 U	7.3	6.7	1.1 U	2.4 UJ	2.2 U	2 U	**14 T**
G192	LW2-G192	1.66 U	1.69 U	7.92	25.2 J	19	1.55 U	1.33 U	3.08 U	2.78 U	**52.1 JT**
G193	LW2-G193	1.4 U	1.4 U	12 J	0.87 U	11	1.3 U	1.1 U	2.6 U	2.4 U	**23 JT**
G194	LW2-G194	1.3 U	1.3 U	1.6 U	0.77 U	0.98 U	1.2 U	1 U	2.3 U	2.1 U	**2.3 UT**
G195	LW2-G195	1.9 U	2 U	2.5 U	11	8.3	1.8 U	3.9 UJ	3.6 U	3.2 U	**19.3 T**
G197-1	LW2-G197-1	1.46 UJ	1.49 UJ	10.9 J	0.889 UJ	27 J	1.37 UJ	13.7 J	2.71 UJ	2.45 UJ	**51.6 JT**
G197-2	LW2-G197-2	1.62 U	1.65 U	30.8 J	0.984 U	23 J	1.51 U	6.43 J	3 U	2.71 U	**60.2 JT**
G198	LW2-G198	1.61 U	1.64 U	11.9	52.3	30.2	1.5 U	17.6	2.98 U	2.69 U	**112 T**
G199	LW2-G199	1.62 U	1.65 U	5.26	47.9	28.3	1.51 U	11.9	3 U	2.71 U	**93.4 T**
G200	LW2-G200	1.64 U	1.67 U	2.59 J	9.81	4.87 J	1.53 U	1.31 U	3.03 U	2.74 U	**17.3 JT**
G202	LW2-G202	1.82 U	1.86 U	6.54 J	35.7 J	18	1.7 U	3.33 J	3.38 U	3.05 U	**63.6 JT**
G203-1	LW2-G203-1	1.8 UT	2 UT	14 JT	1.2 UT	35 T	1.8 UT	17 T	3.6 UT	3.2 UT	**66 JT**
G203-2	LW2-G203-2	1.7 U	1.8 U	13 J	1.1 U	32	1.6 U	12.5	3.2 U	2.9 U	**57.5 JT**
G204	LW2-G204	1.52 U	1.55 U	8.18	23.9 J	12.5	1.42 U	12.8	2.82 U	2.54 U	**57.4 JT**
G205	LW2-G205	1.27 U	1.29 U	1.66 U	0.773 U	1.69 J	1.19 U	1.02 U	2.55 UJ	2.13 U	**1.69 JT**
G206	LW2-G206	1.74 U	1.77 U	14.6 J	55 J	50.3 J	1.63 U	1.4 U	3.23 U	2.91 U	**120 JT**
G207	LW2-G207	3.72 U	3.78 U	36.4	102 J	55.8	3.48 U	10.6	6.89 U	6.22 U	**205 JT**
G208	LW2-G208	1.4 U	1.4 U	1.8 U	13	5.1	1.3 U	1.1 UJ	2.6 U	2.3 U	**18.1 T**
G209	LW2-G209	2.94 U	2.99 U	13	112	61.4	2.75 U	9.37	5.45 U	4.92 U	**196 T**
G210	LW2-G210	1.88 U	1.91 U	2.45 U	1.14 U	2.39 J	1.76 U	1.51 U	3.48 U	3.15 U	**2.39 JT**
G212-1	LW2-G212-1	1.57 UJ	1.6 UJ	5.39 J	27.2 J	4.32 J	1.47 UJ	1.26 UJ	2.92 UJ	2.63 UJ	**36.9 JT**
G212-2	LW2-G212-2	1.54 UJ	1.57 UJ	2.01 UJ	2.57 J	1.2 UJ	1.44 UJ	1.23 UJ	2.85 UJ	2.58 UJ	**2.57 JT**
G213	LW2-G213	1.79 U	1.82 U	2.33 U	1.09 U	1.4 U	1.67 U	1.43 U	3.31 U	2.99 U	**3.31 UT**
G214-1	LW2-G214-1	3.8 U	3.9 U	4.9 U	2.3 U	39	3.5 U	3 U	7 U	6.3 U	**39 T**
G215	LW2-G215	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	48 J	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	**48 JT**
G216	LW2-G216	2.4 UJ	2.4 UJ	2.4 UJ	2.4 UJ	2.4 UJ	2.4 UJ	2.4 UJ	2.4 UJ	2.4 UJ	**2.4 UJT**
G217	LW2-G217	1.38 U	1.41 U	1.8 U	0.84 U	1.08 U	1.29 U	1.11 U	2.56 U	2.31 U	**2.56 UT**
G218	LW2-G218	6.6 U	6.7 U	8.6 U	4 U	270 J	6.1 U	5.3 U	12 U	11 U	**270 JT**
G220	LW2-G220	3.2 UJ	3.2 UJ	3.2 UJ	3.2 UJ	3.2 UJ	3.2 UJ	3.2 UJ	3.2 UJ	3.2 UJ	**3.2 UJT**
G221	LW2-G221	1.3 U	1.9 U	2.8 U	0.88 U	3.6 J	1.3 U	1.1 U	2.6 U	2.3 U	**3.6 JT**
G222	LW2-G222	1.6 U	1.6 U	5.9 U	8.9 J	5.4 J	1.5 U	1.3 UJ	2.9 U	2.6 U	**14.3 JT**
G224	LW2-G224	1.6 U	1.6 U	2.1 U	0.98 U	10	1.5 U	1.3 UJ	3 U	2.7 U	**10 T**
G225	LW2-G225	18 UJ	18 UJ	18 UJ	18 UJ	18 UJ	18 UJ	18 UJ	18 UJ	18 UJ	**18 UJT**
G226	LW2-G226	1.8 U	1.9 U	2.4 U	1.1 U	26 J	1.7 U	1.5 U	3.4 U	3.1 U	**26 JT**
G227	LW2-G227	1.3 U	1.3 U	1.7 U	2.6 J	1.6 J	1.2 U	1 U	2.4 U	2.2 U	**4.2 JT**
G228	LW2-G228	2 U	2 U	2.6 U	1.2 U	16 J	1.9 U	1.6 U	3.7 U	3.3 U	**16 JT**
G229	LW2-G229	3.5 UJ	3.5 UJ	3.5 UJ	3.5 UJ	3.5 UJ	3.5 UJ	3.5 UJ	3.5 UJ	3.5 UJ	**3.5 UJT**
G230	LW2-G230	7.3 U	7.4 U	9.5 U	220	5.7 U	6.8 U	5.8 U	14 U	12 U	**220 T**
G231	LW2-G231	1.42 U	1.44 U	1.85 U	0.863 U	2.02 J	1.33 U	1.14 U	2.63 U	2.37 U	**2.02 JT**
G232	LW2-G232	1.75 U	1.78 U	5.75 J	1.07 U	40.5	1.64 U	3.51 UJ	3.25 U	2.94 U	**46.3 JT**
G233	LW2-G233	1.67 U	1.7 U	2.18 U	18.1	7.94 J	1.56 U	1.34 U	3.1 U	2.8 U	**26 JT**
G234	LW2-G234	2.43 U	2.47 U	3.16 U	1.47 U	1.89 U	2.27 U	1.95 U	4.49 U	4.06 U	**4.49 UT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No / Chemical Name / Unit	12674-11-2 Aroclor 1016 ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
Location	**Sample ID**										
G235	LW2-G235	1.1 U	1.1 U	1.4 U	0.67 U	0.86 U	1 U	0.88 U	2 U	1.8 U	**2 UT**
G236	LW2-G236	4.7 U	4.8 U	6.1 U	2.8 U	160 J	4.4 U	3.7 U	8.7 U	7.8 U	**160 JT**
G237	LW2-G237	2.1 U	2.2 U	4.3 UJ	12 J	4.3 UJ	4.3 UJ	1.7 UJ	4 U	3.6 U	**12 JT**
G238	LW2-G238	2 U	2 U	33	75 J	38	1.9 U	1.6 U	3.7 U	3.4 U	**146 JT**
G239	LW2-G239	7.1 U	7.2 U	9.2 U	4.3 U	220	6.6 U	5.7 U	13 U	12 U	**220 T**
G240	LW2-G240	1.9 U	1.9 U	2.4 U	3.8 UJ	3.8 UJ	3.8 UJ	1.5 U	3.4 U	3.1 U	**3.8 UJT**
G241	LW2-G241	1.7 U	1.7 U	21	77	1.3 U	1.5 U	3.3 UJ	3.1 U	2.8 U	**98 T**
G242	LW2-G242	1.8 U	3.5 UJ	3.5 UJ	3.5 UJ	3.5 UJ	3.5 UJ	1.4 U	3.3 U	3.5 UJ	**3.5 UJT**
G243	LW2-G243	1.8 U	1.8 U	3.9 J	16 J	9.5	1.7 U	1.5 U	3.4 U	3 U	**29.4 JT**
G244	LW2-G244	3.08 U	3.14 U	4.02 U	49	133 J	2.88 U	2.47 U	5.71 U	5.16 U	**182 JT**
G245	LW2-G245	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	8.8	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	**8.8 T**
G246	LW2-G246	2.2 U	2.2 U	2.9 U	4.4 UJ	4.4 UJ	4.4 UJ	1.8 U	4.1 U	3.7 U	**4.4 UJT**
G247	LW2-G247	3.18 U	3.23 U	10.2	103	43.7	2.97 U	2.55 U	5.89 U	5.32 U	**157 T**
G248	LW2-G248	2.4 U	2.5 U	3.2 U	1.5 U	1.9 U	2.3 U	2 U	4.5 U	4.1 U	**4.5 UT**
G249	LW2-G249	1.38 U	1.41 U	1.8 U	0.841 U	2.74 J	1.29 U	1.11 U	2.56 U	2.32 U	**2.74 JT**
G250-1	LW2-G250	1.29 U	1.31 U	2.58 UJ	9.8 J	1.01 U	1.2 U	1.03 U	2.39 U	2.16 U	**9.8 JT**
G251-1	LW2-G251-1	1.9 U	1.9 U	3.8 UJ	3.8 UJ	8.6	1.8 U	1.5 U	3.5 U	3.2 U	**8.6 T**
G251-1	LW2-G251-2	2.1 U	2.1 U	4.2 UJ	4.2 UJ	8.9 J	1.9 U	1.7 U	3.9 U	3.5 U	**8.9 JT**
G252	LW2-G252	1.3 U	1.4 U	1.8 U	0.82 U	4.1 J	1.3 U	1.1 U	2.5 U	2.3 U	**4.1 JT**
G253	LW2-G253	1.2 U	1.2 U	1.6 U	0.73 U	0.94 U	1.1 U	0.97 U	2.2 U	2 U	**2.2 UT**
G254	LW2-G254	1.47 U	1.5 U	1.92 U	23.8 J	28.9 J	1.37 U	1.18 U	2.72 U	2.46 U	**52.7 JT**
G255	LW2-G255	1.6 U	1.6 U	2 U	3.7 J	1.2 U	1.5 U	2.4 J	2.9 U	2.6 U	**6.1 JT**
G257	LW2-G257	1.4 U	1.5 U	1.9 U	0.87 U	27	1.3 U	2.9 UJ	2.7 U	2.4 U	**27 T**
G258	LW2-G258	1.2 U	1.3 U	1.6 U	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.3 U	2.1 U	**2.5 UJT**
G259	LW2-G259	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	**3.8 UJT**
G260	LW2-G260	1.18 U	1.2 U	1.54 U	0.718 U	7.75 J	1.1 U	0.948 U	2.37 U	1.98 U	**7.75 JT**
G261	LW2-G261	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	**2.5 UJT**
G263	LW2-G263	3.17 UJ	3.17 UJ	3.17 UJ	3.17 UJ	3.17 UJ	3.17 UJ	3.17 UJ	3.17 UJ	3.17 UJ	**3.17 UJT**
G264	LW2-G264	4.64 UJ	4.64 UJ	4.64 UJ	4.64 UJ	4.64 UJ	4.64 UJ	4.64 UJ	4.64 UJ	4.64 UJ	**4.64 UJT**
G266	LW2-G266	1.6 U	1.6 U	2.1 U	3.2 UJ	6.7	1.5 U	3.2 UJ	2.9 U	2.6 U	**6.7 T**
G267	LW2-G267	3.86 UJ	3.86 UJ	3.86 UJ	3.86 UJ	3.86 UJ	3.86 UJ	3.86 UJ	3.86 UJ	3.86 UJ	**3.86 UJT**
G268	LW2-G268	1.96 U	2 U	9.29	58.6	44.5 J	1.83 U	3.93 U	3.64 U	3.28 U	**112 JT**
G270-1	LW2-G270-1	4.3 UJ	4.3 UJ	4.3 UJ	4.3 UJ	4.3 UJ	4.3 UJ	4.3 UJ	4.3 UJ	4.3 UJ	**4.3 UJT**
G270-2	LW2-G270-2	4.5 UJ	4.5 UJ	4.5 UJ	4.5 UJ	4.5 UJ	4.5 UJ	4.5 UJ	4.5 UJ	4.5 UJ	**4.5 UJT**
G271	LW2-G271	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	2.3 UJ	**2.3 UJT**
G272	LW2-G272	1.5 U	1.5 U	2 U	0.92 U	4.3 J	1.4 U	3 UJ	2.8 U	2.5 U	**4.3 JT**
G273	LW2-G273	1.73 UJ	1.75 UJ	30.8 J	59 J	32.6 J	1.61 UJ	1.38 UJ	3.2 UJ	2.89 UJ	**122 JT**
G274	LW2-G274	1.34 U	1.37 U	1.75 U	0.816 U	1.05 U	1.25 U	1.08 U	2.69 UJ	2.25 U	**2.69 UJT**
G276	LW2-G276	4.94 UJ	4.94 UJ	4.94 UJ	4.94 UJ	4.94 UJ	4.94 UJ	4.94 UJ	4.94 UJ	4.94 UJ	**4.94 UJT**
G277	LW2-G277	1.95 U	1.98 U	2.54 U	14 J	32.9 J	1.82 U	1.56 U	3.61 U	3.26 U	**46.9 JT**
G278	LW2-G278	4.92 UJ	4.92 UJ	4.92 UJ	4.92 UJ	4.92 UJ	4.92 UJ	4.92 UJ	4.92 UJ	4.92 UJ	**4.92 UJT**
G280	LW2-G280	4.25 U	4.33 U	5.82 J	2.59 U	341 J	3.97 U	3.41 U	7.88 U	7.12 U	**347 JT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	12674-11-2 Aroclor 1016 ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
Location	**Sample ID**										
G282	LW2-G282	50.7 U	51.6 U	159 J	365 J	2610 J	47.4 U	40.7 U	93.9 U	84.9 U	**3130 JT**
G283	LW2-G283	3.81 UJ	3.81 UJ	3.81 UJ	3.81 UJ	3.81 UJ	3.81 UJ	3.81 UJ	3.81 UJ	3.81 UJ	**3.81 UJT**
G284	LW2-G284	4.92 UJ	4.92 UJ	4.92 UJ	4.92 UJ	4.92 UJ	4.92 UJ	4.92 UJ	4.92 UJ	4.92 UJ	**4.92 UJT**
G285	LW2-G285	1.2 U	1.3 U	1.6 U	0.76 U	0.97 U	1.2 U	2.5 UJ	2.3 U	2.1 U	**2.5 UJT**
G288	LW2-G288	3.48 U	3.54 U	4.54 U	6.98 UJ	2.72 U	3.25 U	2.79 U	6.98 U	5.83 U	**6.98 UT**
G292	LW2-G292	1.7 U	1.73 U	2.21 U	14 J	1.32 U	1.59 U	1.36 U	3.14 U	2.84 U	**14 JT**
G293	LW2-G293	1.9 U	2 U	5.5 J	1.2 U	13 J	1.8 U	3.8 UJ	3.6 U	3.2 U	**18.5 JT**
G294-1	LW2-G294-1	4.3 UJ	4.3 UJ	4.3 UJ	4.3 UJ	80 J	4.3 UJ	4.3 UJ	4.3 UJ	4.3 UJ	**80 JT**
G294-2	LW2-G294-2	4.2 UJT	4.2 UJT	36.5 JT	4.2 UJT	26 T	4.2 UJT	4.2 UJT	4.2 UJT	4.2 UJT	**62.5 JT**
G295	LW2-G295	2.11 U	2.15 U	11.3 J	19.8 J	78.7 J	1.97 U	1.69 U	3.91 U	3.53 U	**110 JT**
G296	LW2-G296	3.94 UJ	4.01 UJ	5.14 UJ	29.1 J	116 J	3.68 UJ	3.16 UJ	7.3 UJ	6.59 UJ	**145 JT**
G298	LW2-G298	7.12 UJ	7.24 UJ	9.27 UJ	4.32 UJ	5.55 UJ	6.65 UJ	5.71 UJ	14.2 UJ	11.9 UJ	**14.2 UJT**
G301	LW2-G301	1.82 U	1.85 U	3.64 UJ	3.64 UJ	9.29	3.64 UJ	1.46 U	3.64 U	3.04 U	**9.29 T**
G302	LW2-G302	4.02 UJ	4.02 UJ	71 J	58.8	32.7 J	4.02 UJ	4.02 UJ	4.02 UJ	4.02 UJ	**163 JT**
G303	LW2-G303	1.81 U	1.84 U	2.36 U	18.5 J	93.2	1.69 U	1.45 U	3.35 U	3.03 U	**112 JT**
G305	LW2-G305	4.2 UJ	4.2 UJ	42	4.2 UJ	35	4.2 UJ	4.2 UJ	4.2 UJ	4.2 UJ	**77 T**
G306	LW2-G306	1.4 U	1.4 U	1.8 U	0.82 U	3.4 J	1.3 U	2.7 UJ	2.5 U	2.3 U	**3.4 JT**
G307	LW2-G307	3.5 U	3.6 U	71 J	130 J	69 J	3.3 U	2.8 U	6.5 U	5.9 U	**270 JT**
G308	LW2-G308	1.45 U	1.47 U	18.4 J	34.4	15.3 J	1.35 U	1.16 U	2.68 U	2.42 U	**68.1 JT**
G309	LW2-G309	2.3 U	2.3 U	10 J	1.4 U	19 J	2.1 U	4.5 UJ	4.2 U	3.8 U	**29 JT**
G310	LW2-G310	4.2 U	4.3 U	77 J	150 J	80 J	3.9 U	8.4 UJ	7.8 U	7 U	**307 JT**
G311-1	LW2-G311-1	3.9 UJT	3.9 UJT	3.9 UJT	3.9 UJT	170 JT	3.9 UJT	3.9 UJT	3.9 UJT	3.9 UJT	**170 JT**
G311-2	LW2-G311-2	3.4 UJ	3.4 UJ	30 J	3.4 UJ	10	3.4 UJ	3.4 UJ	3.4 UJ	3.4 UJ	**40 JT**
G313	LW2-G313	5.6 U	5.7 U	62 J	110 J	65 J	5.2 U	11 UJ	10 U	9.4 U	**237 JT**
G314	LW2-G314	2.3 U	2.3 U	5.8 J	1.4 U	11 J	2.1 U	4.6 UJ	4.2 U	3.8 U	**16.8 JT**
G315	LW2-G315	3.64 UJ	3.64 UJ	3.64 UJ	3.64 UJ	3.64 UJ	3.64 UJ	3.64 UJ	3.64 UJ	3.64 UJ	**3.64 UJT**
G316	LW2-G316	1.31 U	1.34 U	1.71 U	0.798 U	1.02 U	1.23 U	1.05 U	2.43 U	2.2 U	**2.43 UT**
G317	LW2-G317	1.5 U	1.5 U	1.9 U	0.9 U	2 J	1.4 U	3 UJ	2.8 U	2.5 U	**2 JT**
G318	LW2-G318	1.41 U	1.43 U	16.9 J	18.7	10.2	1.31 U	1.13 U	2.81 U	2.35 U	**45.8 JT**
G319	LW2-G319	1.3 U	1.3 U	1.7 U	0.79 U	1 U	1.2 U	2.6 UJ	2.4 U	2.2 U	**2.6 UJT**
G320	LW2-G320	1.35 U	1.38 U	11.4 J	17.1	9.58	1.26 U	1.08 U	2.71 U	2.26 U	**38.1 JT**
G321	LW2-G321	5.67 UJ	5.67 UJ	3.69 U	72.2	44.8	2.64 U	2.27 UJ	5.67 UJ	5.67 UJ	**117 T**
G322	LW2-G322	1.7 U	1.7 U	110 J	58 J	24 J	1.6 U	3.4 UJ	3.2 U	2.9 U	**192 JT**
G323	LW2-G323	1.26 U	1.28 U	1.64 U	0.766 U	2.27 J	1.18 U	1.01 U	2.34 U	2.11 U	**2.27 JT**
G324-1	LW2-G324-1	1.3 U	1.3 U	11 J	0.8 U	8.8 J	1.2 U	1.1 U	2.4 U	2.2 U	**19.8 JT**
G324-2	LW2-G324-2	1.2 U	1.3 U	4.3 J	0.75 U	10	1.2 U	1 U	2.3 U	2.1 U	**14.3 JT**
G325	LW2-G325	3 U	3.1 U	3.9 U	1.8 U	5.8 J	2.8 U	6 UJ	5.6 U	5 U	**5.8 JT**
G326	LW2-G326	1.5 U	1.5 U	12 J	45 J	27 J	1.4 U	2.9 UJ	2.7 U	2.4 U	**84 JT**
G327	LW2-G327	2.89 U	2.94 U	50.6	112	71.9	2.7 U	11.2 J	5.36 U	4.84 U	**246 JT**
G328	LW2-G328	1.4 U	1.4 U	1.8 U	2.1 J	1.1 U	1.3 U	2.8 UJ	2.6 U	2.3 U	**2.1 JT**
G329	LW2-G329	4.92 UJ	4.92 UJ	4.92 UJ	1.49 UJ	1.92 UJ	2.3 UJ	1.97 UJ	4.92 UJ	4.92 UJ	**4.92 UJT**
G330	LW2-G330	8.5 UJ	8.5 UJ	8.5 UJ	8.5 UJ	37 J	8.5 UJ	8.5 UJ	8.5 UJ	8.5 UJ	**37 JT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	**12674-11-2**	**53469-21-9**	**12672-29-6**	**11097-69-1**	**11096-82-5**	**37324-23-5**	**11100-14-4**	**11104-28-2**	**11141-16-5**	**Total**
	Chemical Name	**Aroclor 1016**	**Aroclor 1242**	**Aroclor 1248**	**Aroclor 1254**	**Aroclor 1260**	**Aroclor 1262**	**Aroclor 1268**	**Aroclor 1221**	**Aroclor 1232**	**Aroclors**
	Unit	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
Location	**Sample ID**										
G331	LW2-G331	3.97 U	4.04 U	5.18 U	2.41 U	10.6 J	3.71 U	3.19 U	7.36 U	6.65 U	**10.6 JT**
G332	LW2-G332	41.9 UJ	41.9 UJ	41.9 UJ	41.9 UJ	41.9 UJ	41.9 UJ	16.8 UJ	41.9 UJ	41.9 UJ	**41.9 UJT**
G333	LW2-G333	7.32 U	14.7 UJ	14.7 UJ	14.7 UJ	35.6 J	14.7 UJ	5.87 U	14.7 U	12.2 U	**35.6 JT**
G334	LW2-G334	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	3.8 UJ	**3.8 UJT**
G335	LW2-G335	5.13 UJ	5.13 UJ	5.13 UJ	5.13 UJ	5.91	5.13 UJ	5.13 UJ	5.13 UJ	5.13 UJ	**5.91 T**
G336	LW2-G336	2.61 U	2.66 U	3.41 U	1.59 U	19.3	2.44 U	2.1 U	5.23 U	4.37 U	**19.3 T**
G338	LW2-G338	2.07 U	2.11 U	2.7 U	1.26 U	4.75	1.94 U	1.65 UJ	3.84 U	3.47 U	**4.75 T**
G339	LW2-G339	3.54 UJ	3.54 UJ	20.7	3.54 UJ	10.8	3.54 UJ	1.42 UJ	40.1	3.54 UJ	**71.6 T**
G340	LW2-G340	1.6 U	1.63 U	2.08 U	0.972 U	4.52	1.49 U	1.28 UJ	2.96 U	2.68 U	**4.52 T**
G342	LW2-G342	1.93 U	1.96 U	2.51 U	10.9 J	6.93 J	1.8 U	1.54 U	3.56 U	3.22 U	**17.8 JT**
G345-1	LW2-G345-1	3.8 UJT	3.8 UJT	3.8 UJT	3.8 UJT	19.5 JT	3.8 UJT	3.8 UJT	3.8 UJT	3.8 UJT	**19.5 JT**
G345-2	LW2-G345-2	7.3 UJ	7.3 UJ	7.3 UJ	7.3 UJ	17 J	7.3 UJ	7.3 UJ	7.3 UJ	7.3 UJ	**17 JT**
G346	LW2-G346	2.17 U	2.2 U	2.94 J	22.5 J	20.5	2.02 U	1.74 U	4.01 U	3.62 U	**45.9 JT**
G347	LW2-G347	2.19 U	2.22 U	9.26 J	24.4	28.6 J	2.04 U	1.75 U	4.05 U	3.65 U	**62.3 JT**
G348	LW2-G348	14.2 U	14.4 U	28.4 UJ	28.4 UJ	34.6	13.3 U	11.4 U	28.4 U	23.8 U	**34.6 T**
G350	LW2-G350	25.9 UJ	25.9 UJ	25.9 UJ	25.9 UJ	35.7 J	25.9 UJ	10.4 U	25.9 U	25.9 UJ	**35.7 JT**
G351	LW2-G351	11.2 UJ	11.2 UJ	211 J	75.8 J	21.7 J	11.2 UJ	11.2 UJ	11.2 UJ	11.2 UJ	**309 JT**
G351-2	LW2-G351-2	3.87 UJT	3.93 UJT	126 JT	45.3 JT	3.02 UJT	3.61 UJT	3.1 UJT	7.16 UJT	6.47 UJT	**171 JT**
G352	LW2-G352	1.78 U	1.81 U	2.33 U	16.8 J	9.41	1.67 U	1.43 U	3.3 U	2.98 U	**26.2 JT**
G353-1	LW2-G353-1	39 U	40 U	51 U	78 UJ	78 UJ	36 U	78 UJ	72 U	68 U	**78 UJT**
G353-2	LW2-G353-2	38 U	39 U	76 UJ	76 UJ	30 U	36 U	76 UJ	70 U	64 U	**76 UJT**
G354	LW2-G354	2.27 U	2.31 U	2.96 U	7.22	1.77 U	2.12 U	1.82 UJ	4.21 U	3.8 U	**7.22 T**
G355	LW2-G355	541 U	550 U	705 U	329 U	422 U	505 U	434 U	1000 U	905 U	**1000 UT**
G358	LW2-G358	2.3 U	2.3 U	3 U	1.4 U	9	2.1 U	4.6 UJ	4.2 U	3.8 U	**9 T**
G359	LW2-G359	4.38 UJ	4.38 UJ	4.38 UJ	4.38 UJ	4.38 UJ	4.38 UJ	1.75 UJ	4.38 UJ	4.38 UJ	**4.38 UJT**
G360	LW2-G360	1.85 UJ	1.88 UJ	116 J	3.71 UJ	34.8 J	1.73 UJ	1.49 UJ	3.43 UJ	3.1 UJ	**151 JT**
G362-1	LW2-G362-1	2.13 UT	2.17 UT	23.7 JT	14.9 JT	9.9 JT	1.99 UT	1.71 UT	3.95 UT	3.57 UT	**48.5 JT**
G362-2	LW2-G362-2	2.15 U	2.18 U	2.8 U	12.9	5.09	2.01 U	1.72 U	3.98 U	3.59 U	**18 T**
G363	LW2-G363	2.05 U	2.09 U	15.5	20.7 J	46	1.92 U	1.65 UJ	3.8 U	3.44 U	**82.2 JT**
G364	LW2-G364	1.51 U	1.53 U	8.5 J	77 J	62.5 J	1.41 U	1.21 U	2.79 U	2.52 U	**148 JT**
G365	LW2-G365	5.02 U	5.11 U	41.4	3.05 U	53.8	4.69 U	4.03 UJ	9.3 U	8.4 U	**95.2 T**
G366	LW2-G366	4.51 UJ	4.51 UJ	4.51 UJ	4.51 UJ	13.8 J	4.51 UJ	4.51 UJ	4.51 UJ	4.51 UJ	**13.8 JT**
G367	LW2-G367	9.57 U	9.74 U	106	728	147	8.94 U	7.68 U	17.7 U	16 U	**981 T**
G368	LW2-G368	2.19 U	2.23 U	7.78 J	3.65 J	2.49 J	2.04 U	1.75 U	4.05 U	3.66 U	**13.9 JT**
G369	LW2-G369	2.41 U	2.45 U	3.14 U	10.8	9.5	2.25 U	4.83 UJ	4.46 U	4.03 U	**20.3 T**
G370	LW2-G370	2.16 U	2.2 U	2.81 U	25.5	15.2	2.02 U	1.73 U	4 U	3.61 U	**40.7 T**
G371	LW2-G371	2.91 U	2.96 U	56.9 J	21 J	6.86	2.72 U	2.33 U	5.39 U	4.87 U	**84.8 JT**
G372-1	LW2-G372-1	5.2 UT	5.2 UT	6.7 UT	133 T	45.5 JT	4.8 UT	10 UJT	9.5 UT	8.6 UT	**179 JT**
G372-2	LW2-G372-2	5.3 U	5.4 U	6.9 U	62	33	5 U	11 UJ	9.9 U	8.9 U	**95 T**
G373	LW2-G373	2.4 U	2.4 U	3.1 U	8 J	7.1 J	2.2 U	4.7 UJ	4.4 U	4 U	**15.1 JT**
G374	LW2-G374	2.37 U	2.41 U	3.09 U	12.8 J	9.8 J	2.21 U	4.74 UJ	4.39 U	3.96 U	**22.6 JT**
G375	LW2-G375	2.2 U	2.24 U	2.87 U	20.9 J	14	2.05 U	4.4 UJ	4.07 U	3.68 U	**34.9 JT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	12674-11-2	53469-21-9	12672-29-6	11097-69-1	11096-82-5	37324-23-5	11100-14-4	11104-28-2	11141-16-5	Total
	Chemical Name	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclors
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**										
G376	LW2-G376	2.31 U	2.35 U	35	142	39.4	2.16 U	1.85 U	4.28 U	3.86 U	**216 T**
G377	LW2-G377	1.27 U	1.29 U	1.65 U	0.851 J	0.99 U	1.19 U	1.02 U	2.35 U	2.12 U	**0.851 JT**
G378	LW2-G378	2.05 U	2.09 U	2.68 U	10.4 J	9.41 J	1.92 U	4.11 UJ	3.8 U	3.44 U	**19.8 JT**
G379	LW2-G379	11.6 U	11.8 U	32	130	218	10.8 U	9.31 U	21.5 U	19.4 U	**380 T**
G380	LW2-G380	2.5 U	2.55 U	32.7	113	29.1	2.34 U	2.01 U	4.63 U	4.19 U	**175 T**
G381	LW2-G381	4.04 U	4.11 U	39	2.45 U	46.2	3.77 U	8.08 UJ	7.48 U	6.75 U	**85.2 T**
G382	LW2-G382	2.51 U	2.56 U	46.6	184	215 J	2.35 U	2.01 U	4.65 U	4.2 U	**446 JT**
G383	LW2-G383	1.21 U	1.23 U	5.97 J	22.9	6.68 J	1.13 U	0.972 U	2.24 U	2.03 U	**35.6 JT**
G384-1	LW2-G384-1	2.7 UT	2.7 UT	3.5 UT	28.5 JT	15.5 T	2.5 UT	5.4 UJT	5 UT	4.5 UT	**44 JT**
G384-2	LW2-G384-2	3 U	3.1 U	15 J	53 J	23	2.8 U	6.1 UJ	5.6 U	5.1 U	**91 JT**
G385	LW2-G385	10.7 U	10.9 U	85.5	637	260	10 U	8.6 U	19.9 U	17.9 U	**983 T**
G386	LW2-G386	5.03 U	5.12 U	14.7	41.1	12.4	4.7 U	4.04 UJ	99.4	8.42 U	**168 T**
G387	LW2-G387	2.8 U	2.9 U	3.7 U	11	7.9	2.6 U	5.6 UJ	5.2 U	4.7 U	**18.9 T**
G388	LW2-G388	2.56 U	2.6 U	11.9	86.4	16.7 J	2.39 U	2.05 U	4.74 U	4.28 U	**115 JT**
G389	LW2-G389	1.47 U	1.5 U	1.92 U	0.895 U	1.15 U	1.38 U	1.18 U	2.73 U	2.46 U	**2.73 UT**
G390	LW2-G390	53 UJ	53 UJ	53 UJ	1100	330	53 UJ	53 UJ	53 UJ	53 UJ	**1430 T**
G391	LW2-G391	2.27 U	2.31 U	5.2 J	1.38 U	7.7	2.12 U	4.54 UJ	4.2 U	3.8 U	**12.9 JT**
G392	LW2-G392	1.9 U	1.93 U	2.47 U	40.4 J	34.1 J	1.77 U	1.52 U	3.51 U	3.17 U	**74.5 JT**
G393	LW2-G393	22.3 U	22.7 U	283	667	1360	20.8 U	17.9 U	41.3 U	37.3 U	**2310 T**
G394	LW2-G394	17.1 U	17.4 U	22.3 U	10.4 U	703	16 U	34.2 UJ	31.7 U	28.6 U	**703 T**
G395	LW2-G395	3.39 UJ	3.39 UJ	2.21 U	12.3 J	6.41 J	1.58 U	3.39 UJ	3.14 U	3.39 UJ	**18.7 JT**
G396	LW2-G396	1.52 U	1.55 U	1.99 U	0.925 U	1.19 U	1.42 U	1.22 U	2.82 U	2.55 U	**2.82 UT**
G397	LW2-G397	20 U	20 U	26 U	12 U	330	19 U	40 UJ	37 U	34 U	**330 T**
G398	LW2-G398	2.6 U	2.6 U	3.4 U	5.2 UJ	5.2 UJ	5.2 UJ	5.2 UJ	4.8 U	4.3 U	**5.2 UJT**
G399	LW2-G399	1.47 U	1.49 U	14.1 J	0.89 U	10.5	1.37 U	2.93 UJ	2.71 U	2.45 U	**24.6 JT**
G400	LW2-G400	1.74 U	1.77 U	2.27 U	8.76	5.12	1.63 U	3.49 UJ	3.23 U	2.92 U	**13.9 T**
G401	LW2-G401	1.72 U	1.75 U	13	15.3	7.99	1.61 U	1.38 U	3.18 U	2.88 U	**36.3 T**
G402	LW2-G402	12.8 U	13 U	45.6 J	193	440	12 U	10.3 U	23.7 U	21.4 U	**679 JT**
G403	LW2-G403	1.27 U	1.29 U	1.66 U	0.773 U	0.992 U	1.19 U	1.02 U	2.35 U	2.13 U	**2.35 UT**
G404	LW2-G404	5.78 U	5.88 U	14.5	3.51 U	12.4	5.4 U	11.6 UJ	10.7 U	9.67 U	**26.9 T**
G405	LW2-G405	1.24 U	1.26 U	1.62 U	8.88	5.86	1.16 U	0.995 U	2.3 U	2.08 U	**14.7 T**
G406	LW2-G406	3.4 UJ	3.4 UJ	3.4 UJ	3.4 UJ	8.3 J	3.4 UJ	3.4 UJ	3.15 U	3.4 UJ	**8.3 JT**
G407	LW2-G407	1.68 U	1.71 U	11.3	75.7 J	9.5	1.57 U	1.35 U	3.11 U	2.81 U	**96.5 JT**
G408	LW2-G408	2.63 U	2.68 U	12.8	74.7 J	36.5	2.46 U	2.11 U	4.88 U	4.41 U	**124 JT**
G409	LW2-G409	1.81 U	1.84 U	2.36 U	8.59 J	4.66 J	1.69 U	1.45 U	3.35 U	3.03 U	**13.3 JT**
G410-1	LW2-G410-1	2.5 U	2.54 U	3.26 U	12.8	9.08	2.33 U	2 U	4.63 U	4.18 U	**21.9 T**
G410-2	LW2-G410-2	2.65 U	2.7 U	3.46 U	9 J	12.1 J	2.48 U	2.13 U	4.91 U	4.44 U	**21.1 JT**
G411	LW2-G411	1.22 U	1.24 U	1.59 U	6.48 J	9.61	1.14 U	0.981 U	2.27 U	2.05 U	**16.1 JT**
G412	LW2-G412	1.86 U	3.73 UJ	3.73 UJ	3.73 UJ	9.05 J	3.73 UJ	3.73 UJ	3.45 U	3.11 U	**9.05 JT**
G413	LW2-G413	1.21 U	1.23 U	9.17 J	35.6	6.36	1.13 U	0.974 U	2.25 U	2.03 U	**51.1 JT**
G414	LW2-G414	1.93 U	1.96 U	2.51 U	1.17 U	7.67 J	1.8 U	3.86 UJ	3.57 U	3.23 U	**7.67 JT**
G415	LW2-G415	6.09 U	6.19 U	105	522	253 J	5.68 U	4.88 U	11.3 U	10.2 U	**880 JT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	12674-11-2	53469-21-9	12672-29-6	11097-69-1	11096-82-5	37324-23-5	11100-14-4	11104-28-2	11141-16-5	Total
	Chemical Name	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclors
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID										
G416	LW2-G416	5.43 U	5.52 U	27	137 J	169	5.07 U	4.35 U	10.1 U	9.08 U	**333 JT**
G417	LW2-G417	4.05 U	4.11 U	5.27 U	42.1 U	107	3.78 U	3.24 U	7.49 U	6.77 U	**107 T**
G418	LW2-G418	2.42 U	2.46 U	3.16 U	1.47 U	14.3 J	2.26 U	4.85 UJ	4.48 U	4.05 U	**14.3 JT**
G419	LW2-G419	1.97 U	2 U	2.57 U	14.3 J	14.7	1.84 U	3.95 UJ	3.65 U	3.3 U	**29 JT**
G420	LW2-G420	1.89 U	1.92 U	2.46 U	11.4 J	5.56	1.76 U	1.51 U	3.5 U	3.16 U	**17 JT**
G421	LW2-G421	11 U	11.1 U	76.4	345	134 J	10.2 U	8.78 U	20.3 U	18.3 U	**555 JT**
G422	LW2-G422	1.62 U	1.65 U	20.9	42.1 J	20.5	1.51 U	3.24 UJ	3 U	2.71 U	**83.5 JT**
G423	LW2-G423	2.2 U	2.24 U	6.61	26.6	15.7	2.06 U	4.41 UJ	4.08 U	3.68 U	**48.9 T**
G424	LW2-G424	1.77 U	1.81 U	2.31 U	11.6 J	5.17	1.66 U	1.42 U	3.29 U	2.97 U	**16.8 JT**
G425	LW2-G425	1.31 U	1.33 U	1.71 U	8.86 J	6.01	1.22 U	1.05 U	2.43 U	2.19 U	**14.9 JT**
G426	LW2-G426	2.74 U	2.79 U	27	101	165 J	2.56 U	2.2 U	5.08 U	4.58 U	**293 JT**
G427	LW2-G427	2.01 U	2.05 U	16	64	4.03 UJ	1.88 U	4.03 UJ	3.73 U	3.37 U	**80 T**
G428	LW2-G428	1.95 U	1.98 U	2.54 U	7.67	5.86	1.82 U	3.9 UJ	3.61 U	3.26 U	**13.5 T**
G429	LW2-G429	1.61 U	1.63 U	2.09 U	0.977 U	25.2	1.5 U	3.22 UJ	2.98 U	2.69 U	**25.2 T**
G430	LW2-G430	1.31 U	1.34 U	1.71 U	2.39 J	1.02 U	1.23 U	1.05 U	2.43 U	2.2 U	**2.39 JT**
G431	LW2-G431	1.55 U	1.58 U	18.6	30.2	77.7 J	1.45 U	1.25 U	2.88 U	2.6 U	**127 JT**
G432	LW2-G432	9.13 U	9.28 U	69.2	304 J	217	8.52 U	18.3 UJ	16.9 U	15.3 U	**590 JT**
G433-1	LW2-G433-1	1.92 U	1.95 U	3.45 J	9.95	16.8 J	1.79 U	3.63 J	3.55 U	3.2 U	**33.8 JT**
G433-2	LW2-G433-2	2.04 U	2.07 U	3.88 J	9.13	21	1.9 U	1.63 U	3.77 U	3.41 U	**34 JT**
G434	LW2-G434	5.7 U	5.8 U	26.9	127 J	91	5.33 U	11.4 UJ	10.6 U	9.54 U	**245 JT**
G435	LW2-G435	2.04 U	2.08 U	2.66 U	9.78	5.31	1.91 U	4.09 UJ	3.78 U	3.42 U	**15.1 T**
G436	LW2-G436	1.14 U	1.16 U	1.49 U	2.37 J	1.91 J	1.07 U	2.28 UJ	2.11 U	1.91 U	**4.28 JT**
G437	LW2-G437	1.6 U	1.63 U	8.34	28.4	18.8	1.49 U	1.28 U	2.96 U	2.68 U	**55.5 T**
G438	LW2-G438	1.27 U	1.29 U	1.66 U	15.7 J	11.4	1.19 U	2.54 UJ	2.35 U	2.13 U	**27.1 JT**
G439	LW2-G439	2.13 U	2.17 U	4.57	23.6	18.6	1.99 U	1.71 U	3.95 U	3.57 U	**46.8 T**
G440	LW2-G440	1.97 UJ	2 UJ	15.7 J	1.2 UJ	13.7 J	1.84 UJ	1.58 UJ	3.65 UJ	3.29 UJ	**29.4 JT**
G441	LW2-G441	1.77 U	1.8 U	15.7	1.07 U	16.5	1.65 U	1.42 UJ	3.27 U	2.95 U	**32.2 T**
G442	LW2-G442	1.8 U	1.83 U	2.34 U	24.9 J	20	1.68 U	3.59 UJ	3.33 U	3 U	**44.9 JT**
G443	LW2-G443	2.2 U	2.2 U	2.9 U	4.4 UJ	4.4 UJ	4.4 UJ	4.4 UJ	4.1 U	3.7 U	**4.4 UJT**
G444	LW2-G444	1.89 U	1.92 U	30.7	33.9 J	18.2	1.76 U	1.51 UJ	3.5 U	3.16 U	**82.8 JT**
G445	LW2-G445	11.6 U	11.8 U	186	7.07 U	85	10.9 U	9.33 UJ	21.6 U	19.5 U	**271 T**
G446	LW2-G446	7.45 U	7.58 U	88.6 J	94.2 J	5.81 U	6.96 U	5.98 UJ	13.8 U	12.5 U	**183 JT**
G447	LW2-G447	1.79 UJ	1.82 UJ	18.6 J	32.4 J	16 J	1.67 UJ	1.44 UJ	3.32 UJ	3 UJ	**67 JT**
G448	LW2-G448	6.7 UJ	6.82 UJ	36.6 J	37.3 J	16.1 J	6.26 UJ	5.38 UJ	12.4 UJ	11.2 UJ	**90 JT**
G449	LW2-G449	2.5 U	2.5 U	6.1 J	1.5 U	14	2.3 U	4.9 UJ	4.6 U	4.1 U	**20.1 JT**
G450-1	LW2-G450-1	9.6 U	9.8 U	67	5.8 U	27 J	9 U	19 UJ	18 U	16 U	**94 JT**
G450-2	LW2-G450-2	7.5 U	7.7 U	66	4.6 U	32	7 U	15 UJ	14 U	13 U	**98 T**
G451	LW2-G451	2.94 U	2.99 U	10.3	1.79 U	22.9	2.75 U	2.36 UJ	5.45 U	4.92 U	**33.2 T**
G452	LW2-G452	2.6 U	2.7 U	3.4 U	1.6 U	8.7	2.4 U	5.2 UJ	4.8 U	4.4 U	**8.7 T**
G453	LW2-G453	1310 UJ	1330 UJ	22300 J	794 UJ	5070 J	1220 UJ	1050 UJ	2420 UJ	2190 UJ	**27400 JT**
G454	LW2-G454	1.33 U	1.36 U	1.74 U	7.31 J	4.43	1.24 U	1.07 U	2.47 U	2.23 U	**11.7 JT**
G455	LW2-G455	49.8 U	50.7 U	692	30.3 U	103	46.5 U	40 UJ	92.3 U	83.8 U	**795 T**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

CAS No Chemical Name Unit Location	Sample ID	12674-11-2 Aroclor 1016 ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
G456	LW2-G456	10.4 UJ	10.6 UJ	86.8 J	68.7 J	33.3 J	9.7 UJ	8.33 UJ	19.2 UJ	17.4 UJ	**189 JT**
G457	LW2-G457	3.85 UJ	3.92 UJ	56.8 J	57.8 J	26.9 J	3.6 UJ	3.09 UJ	7.14 UJ	6.45 UJ	**142 JT**
G458	LW2-G458	2.4 U	2.4 U	7.6 J	1.4 U	16	2.2 U	4.7 UJ	4.4 U	4 U	**23.6 JT**
G459	LW2-G459	1.29 U	1.31 U	1.68 U	11.9 J	4.9	1.2 U	1.03 UJ	16.3 J	2.15 U	**33.1 JT**
G460	LW2-G460	2.5 U	2.6 U	3.3 U	1.5 U	9.1	2.4 U	5 UJ	4.7 U	4.2 U	**9.1 T**
G461	LW2-G461	4.3 UJ	4.38 UJ	23 J	38.3 J	17.8 J	4.02 UJ	3.45 UJ	7.97 UJ	7.2 UJ	**79.1 JT**
G462	LW2-G462	2.4 U	2.4 U	5 J	15 J	15 J	2.2 U	4.8 UJ	4.4 U	4 U	**35 JT**
G463	LW2-G463	1.49 U	1.52 U	1.95 U	7.79 J	6.22 J	1.39 U	1.2 UJ	10.7	2.5 U	**24.7 JT**
G464	LW2-G464	2.4 U	2.5 U	3.2 U	1.5 U	10	2.3 U	4.9 UJ	4.5 U	4.1 U	**10 T**
G465	LW2-G465	2.61 UJ	2.61 UJ	2.61 UJ	2.61 UJ	2.61 UJ	2.61 UJ	1.04 UJ	21.6	3.54 UJ	**21.6 T**
G466	LW2-G466	1.86 UJ	1.89 UJ	2.43 UJ	8.62 J	3.1 J	1.74 UJ	1.49 UJ	3.45 UJ	3.11 UJ	**11.7 JT**
G467	LW2-G467	25.3 U	25.7 U	489	616	160	23.6 U	20.3 UJ	46.9 U	42.3 U	**1270 T**
G468	LW2-G468	2.25 UJ	2.29 UJ	24 J	1.37 UJ	22.6 J	2.1 UJ	1.8 UJ	4.16 UJ	3.76 UJ	**46.6 JT**
G469	LW2-G469	2.3 U	2.4 U	3 U	1.4 U	13	2.2 U	4.6 UJ	4.3 U	3.9 U	**13 T**
G470	LW2-G470	1.74 U	1.77 U	2.27 U	8.48 J	7.78	1.63 U	1.4 UJ	44.2	2.92 U	**60.5 JT**
G471	LW2-G471	2.24 UJ	2.28 UJ	2.93 UJ	8.7 J	6.02 J	2.1 UJ	1.8 UJ	4.16 UJ	3.75 UJ	**14.7 JT**
G472	LW2-G472	1.39 U	1.42 U	12.8	11.4	7.6	1.3 U	1.12 U	109	2.33 U	**141 T**
G473	LW2-G473	53.9 U	54.8 U	701	32.8 U	770	50.3 U	43.2 UJ	99.8 U	90.2 U	**1470 T**
G474	LW2-G474	4.8 UJ	4.8 UJ	4.8 UJ	4.8 UJ	16	2.3 U	4.8 UJ	4.8 UJ	4.8 UJ	**16 T**
G475-1	LW2-G475-1	1.83 U	1.86 U	2.38 U	6.61 J	2.63 J	1.71 U	1.46 UJ	3.38 U	3.05 U	**9.24 JT**
G475-2	LW2-G475-2	1.83 U	1.86 U	2.39 U	7.52 J	3.62 J	1.71 U	1.47 UJ	3.39 U	3.06 U	**11.1 JT**
G476	LW2-G476	1.6 U	1.63 U	9.46 J	10.6 J	5.6	1.5 U	1.29 U	78.3	2.68 U	**104 JT**
G477	LW2-G477	51 U	51.8 U	302	1650	411	47.6 U	40.9 UJ	94.4 U	85.2 U	**2360 T**
G478	LW2-G478	1.79 UJ	1.82 UJ	9.69 J	5.89 J	1.4 UJ	1.67 UJ	1.44 UJ	3.32 UJ	3 UJ	**15.6 JT**
G479	LW2-G479	2 UJ	2.04 UJ	4.44 J	1.22 UJ	14.6 J	1.87 UJ	1.61 UJ	3.71 UJ	3.35 UJ	**19 JT**
G480	LW2-G480	1.27 U	1.29 U	18	83.3	43.4	1.18 U	1.02 UJ	2.35 U	2.12 U	**145 T**
G481	LW2-G481	1.61 U	1.64 U	6.4	0.979 U	7.24	1.5 U	1.29 U	61.6	2.69 U	**75.2 T**
G482	LW2-G482	2.3 UJ	2.34 UJ	3 UJ	11.6 J	6.42 J	2.15 UJ	1.85 UJ	4.27 UJ	3.85 UJ	**18 JT**
G483	LW2-G483	1.92 UJ	1.95 UJ	2.5 UJ	1.17 UJ	3.42 J	1.79 UJ	1.54 UJ	3.55 UJ	3.21 UJ	**3.42 JT**
G484	LW2-G484	2.05 U	2.09 U	9.42 J	9.39 J	5.44	1.92 U	1.64 U	71.5	3.43 U	**95.8 JT**
G485	LW2-G485	1.62 UJ	3.23 UJ	2.11 UJ	30.2 J	20.1 J	1.51 UJ	1.3 UJ	3.23 UJ	3.23 UJ	**50.3 JT**
G486	LW2-G486	1.99 UJ	2.03 UJ	2.6 UJ	13.7 J	5.74 J	1.86 UJ	1.6 UJ	3.69 UJ	3.33 UJ	**19.4 JT**
G487	LW2-G487	1.23 U	1.25 U	4.59 J	6.64	6.87 J	1.15 U	0.986 U	28	2.06 U	**46.1 JT**
G488	LW2-G488	8.17 UJ	16.4 UJ	10.6 UJ	4.96 UJ	85 J	7.63 UJ	6.55 UJ	15.1 UJ	13.7 UJ	**85 JT**
G489	LW2-G489	2.21 UJ	2.24 UJ	2.87 UJ	8.21 J	1.72 UJ	2.06 UJ	1.77 UJ	4.08 UJ	3.69 UJ	**8.21 JT**
G490	LW2-G490	2.2 U	2.23 U	2.86 U	1.33 U	6.88	2.05 U	1.76 U	4.07 U	3.67 U	**6.88 T**
G491	LW2-G491	2 U	2.03 U	14.6	1.21 U	20.1	1.87 U	1.6 U	3.7 U	3.34 U	**34.7 T**
G492-1	LW2-G492-1	7.4 UT	7.5 UT	23 T	4.5 UT	150 T	6.9 UT	15 UJT	14 UT	12 UT	**173 T**
G492-2	LW2-G492-2	7.3 U	7.5 U	16	4.5 U	94	6.9 U	15 UJ	14 U	12 U	**110 T**
G493	LW2-G493	2.26 U	2.3 U	2.94 U	1.37 U	8.04	2.11 U	1.81 UJ	4.18 U	3.78 U	**8.04 T**
G494	LW2-G494	19.1 U	19.5 U	86.5 J	104	409	17.9 U	15.4 U	35.5 U	32 U	**600 JT**
G495	LW2-G495	2.4 U	2.44 U	3.13 U	1.46 U	14.6	2.24 U	1.93 U	4.45 U	4.02 U	**14.6 T**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	12674-11-2 Aroclor 1016 ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
Location	**Sample ID**										
G496	LW2-G496	1.31 U	1.33 U	1.71 U	0.796 U	19.4	1.22 U	1.89 J	2.43 U	2.19 U	**21.3 JT**
G497	LW2-G497	5.6 U	5.7 U	71	3.4 U	200	5.3 U	11 UJ	10 U	9.4 U	**271 T**
G498	LW2-G498	1.92 U	1.96 U	2.51 U	1.17 U	5.49	1.8 U	1.54 U	3.56 U	3.22 U	**5.49 T**
G499	LW2-G499	2.21 U	2.24 U	2.88 U	15.9	8.62	2.06 U	1.77 UJ	4.09 U	3.69 U	**24.5 T**
G500	LW2-G500	1.6 U	1.63 U	4.61	24.7 J	14.6	1.5 U	1.29 UJ	2.97 U	2.68 U	**43.9 JT**
G501	LW2-G501	2.39 U	2.43 U	3.11 U	1.45 U	8.91 J	2.23 U	1.91 U	4.42 U	3.99 U	**8.91 JT**
G502	LW2-G502	1.2 U	1.22 U	1.57 U	22.4 J	12.2 J	1.12 U	0.965 UJ	2.23 U	2.01 U	**34.6 JT**
G503	LW2-G503	14.2 U	14.5 U	18.6 U	489	364	13.3 U	44.7	26.4 U	23.8 U	**898 T**
G504	LW2-G504	4.55 U	4.62 U	22.8	91.2 J	53.2	4.25 U	3.65 UJ	8.42 U	7.61 U	**167 JT**
G505	LW2-G505	13.4 UJ	13.4 UJ	13.4 UJ	45.5 J	13.4 UJ	13.4 UJ	13.4 UJ	13.4 UJ	13.4 UJ	**45.5 JT**
G506	LW2-G506	1.71 U	1.74 U	12.8	26	19.9	1.6 U	1.37 UJ	11.5	2.87 U	**70.2 T**
G507	LW2-G507	1.5 U	1.53 U	1.96 U	0.912 U	7.56 J	1.4 U	1.2 UJ	2.78 U	2.51 U	**7.56 JT**
G508	LW2-G508	1.23 U	1.25 U	3.76	15.6 J	7.46	1.15 U	0.986 UJ	2.28 U	2.06 U	**26.8 JT**
G509	LW2-G509	1.87 U	1.9 U	7.47 J	15.8 J	10.6	1.75 U	1.5 UJ	3.47 U	3.13 U	**33.9 JT**
G510	LW2-G510	2.23 U	2.27 U	2.9 U	8.65	1.74 U	2.08 U	1.79 UJ	4.13 U	3.73 U	**8.65 T**
G511	LW2-G511	1.82 U	1.85 U	2.37 U	9.1	6.19	1.7 U	1.46 UJ	3.37 U	3.04 U	**15.3 T**
G512	LW2-G512	1.66 U	1.68 U	2.16 U	1.01 U	1.29 U	1.55 U	1.33 UJ	3.07 U	2.77 U	**3.07 UT**
G513	LW2-G513	1.68 U	1.71 U	2.19 U	8.56	1.31 U	1.57 U	1.34 UJ	3.11 U	2.81 U	**8.56 T**
G514	LW2-G514	2.16 U	2.2 U	2.82 U	7.12	36.2	2.02 U	1.73 UJ	4 U	3.61 U	**43.3 T**
G515	LW2-G515	2.04 U	2.07 U	2.66 U	4.82	8.1	1.9 U	1.63 UJ	3.77 U	3.41 U	**12.9 T**
G516	LW2-G516	1.48 U	1.5 U	1.93 U	6.85	8.88	1.38 U	1.18 UJ	12.4	2.47 U	**28.1 T**
G517	LW2-G517	1.7 U	1.73 U	6.31 J	18.4	11.8	1.58 U	1.36 UJ	3.14 U	2.84 U	**36.5 JT**
G518	LW2-G518	1.59 U	1.62 U	2.08 U	14.6 J	22.3	1.49 U	1.28 UJ	2.95 U	2.67 U	**36.9 JT**
G519-1	LW2-G519-1	2.3 U	33	3 U	24	12	2.2 U	1.9 U	4.3 U	3.9 U	**69 T**
G519-1	LW2-G519-2	2.3 U	30	3.1 U	22	10	2.2 U	1.9 U	4.4 U	3.9 U	**62 T**
G520	LW2-G520	2.37 U	2.41 U	3.09 U	11.8	6.94	2.21 U	1.9 U	4.39 U	3.96 U	**18.7 T**
G521	LW2-G521	1.93 U	1.96 U	6.61	24.5	11.6 J	1.8 U	1.55 U	3.58 U	3.23 U	**42.7 JT**
U1C-1	LW2-U1C-1	1.4 U	1.42 U	1.83 U	0.851 U	4.46	1.31 U	1.12 U	2.59 U	2.34 U	**4.46 T**
U1C-2	LW2-U1C-2	1.37 U	1.39 U	1.78 U	0.832 U	1.07 U	1.28 U	1.1 U	2.53 U	2.29 U	**2.53 UT**
U1C-3	LW2-U1C-3	1.61 U	1.64 U	2.1 U	0.977 U	1.25 U	1.5 U	1.29 U	2.98 U	2.69 U	**2.98 UT**
U2C-1	LW2-U2C-1	1.74 U	1.77 U	2.27 U	2.28	1.53 J	1.62 U	1.39 U	3.22 U	2.91 U	**3.81 JT**
U2C-2	LW2-U2C-2	1.53 U	1.56 U	2 U	26	11 J	1.43 U	1.23 U	2.84 U	2.57 U	**37 JT**
U2C-3	LW2-U2C-3	1.52 U	1.55 U	1.98 U	0.924 U	1.19 U	1.42 U	1.22 U	2.82 U	2.54 U	**2.82 UT**
U3C-1	LW2-U3C-1	1.43 U	1.45 U	1.86 U	0.866 U	1.11 U	1.33 U	1.14 U	2.64 U	2.38 U	**2.64 UT**
U3C-2	LW2-U3C-2	1.59 U	1.61 U	2.07 U	1.16 J	2.3 J	1.48 U	1.27 U	2.94 U	2.65 U	**3.46 JT**
U3C-3	LW2-U3C-3	1.55 U	1.58 U	2.02 U	0.942 U	1.47 J	1.45 U	1.24 U	2.87 U	2.59 U	**1.47 JT**
U4Q-1	LW2-U4Q-1	1.75 U	1.78 U	2.28 U	1.86 J	1.37 U	1.64 U	1.4 U	3.24 U	2.93 U	**1.86 JT**
U4Q-2	LW2-U4Q-2	1.57 U	1.59 U	2.04 U	0.951 U	1.22 U	1.46 U	1.25 U	2.9 U	2.62 U	**2.9 UT**
U4Q-3	LW2-U4Q-3	1.55 U	1.58 U	2.02 U	0.942 U	1.21 U	1.45 U	1.24 U	2.87 U	2.59 U	**2.87 UT**
U5Q-1	LW2-U5Q-1	1.3 U	1.32 U	1.69 U	0.789 U	1.01 U	1.21 U	1.04 U	2.41 U	2.17 U	**2.41 UT**
U5Q-2	LW2-U5Q-2	1.29 U	1.31 U	1.68 U	0.784 U	1.01 U	1.21 U	1.03 U	2.39 U	2.16 U	**2.39 UT**
U5Q-3	LW2-U5Q-3	1.37 U	1.4 U	1.79 U	0.834 U	1.07 U	1.28 U	1.1 U	2.54 U	2.3 U	**2.54 UT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	12674-11-2 Aroclor 1016 ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
Location	**Sample ID**										
U6TOC-1	LW2-U6TOC-1	1.7 U	1.73 U	2.22 U	1.04 U	1.33 U	1.59 U	1.37 U	3.16 U	2.85 U	**3.16 UT**
U6TOC-2	LW2-U6TOC-2	2.83 U	2.88 U	3.69 U	1.72 U	3 J	2.65 U	2.27 U	5.25 U	4.74 U	**3 JT**
U6TOC-3	LW2-U6TOC-3	2.59 U	2.64 U	4.82 J	2.96 J	3.61 J	2.42 U	2.08 U	4.8 U	4.34 U	**11.4 JT**
Subsurface Sediment Samples											
C009	LW2-C009-B	9.1 U	9.25 U	276	169	279	8.5 U	7.29 U	16.8 U	15.2 U	**724 T**
C009	LW2-C009-C	1.57 U	1.59 U	8.77 J	11.5 J	8.75 J	1.46 U	1.26 U	2.9 U	2.62 U	**29 JT**
C011-1	LW2-C011-B1	8.11 UT	8.25 UT	341 JT	268 JT	330 JT	7.57 UT	6.5 UT	15 UT	13.6 UT	**939 JT**
C011-1	LW2-C011-C1	1.69 UT	1.72 UT	33.5 JT	40 T	24.1 JT	1.58 UT	1.35 UT	3.13 UT	2.83 UT	**97.6 JT**
C011-1	LW2-C011-D1	2.68 UT	2.72 UT	40.8 JT	108 JT	83.1 JT	2.5 UT	2.15 UT	4.96 UT	4.48 UT	**232 JT**
C011-2	LW2-C011-B2	9.06 U	9.21 U	344	347 J	584 J	8.46 U	7.26 U	16.8 U	15.2 U	**1280 JT**
C011-2	LW2-C011-C2	82.3 U	3260 J	107 U	1610 J	3030 J	76.9 U	66 U	152 U	138 U	**7900 JT**
C011-2	LW2-C011-D2	1.72 U	1.75 U	46.6 J	39.6	39	1.6 U	1.38 U	3.18 U	2.87 U	**125 JT**
C011-2	LW2-C011-E2	3.9 U	3.96 U	63.4	274 J	240 J	3.64 U	3.12 U	7.22 U	6.52 U	**577 JT**
C015	LW2-C015-B	49.3 U	50.2 U	855 J	703 J	1570	46.1 U	39.6 U	91.4 U	82.5 U	**3130 JT**
C015	LW2-C015-C	1.3 U	1.32 U	2.03 J	7.88	6.1 J	1.21 U	1.04 U	2.4 U	2.17 U	**16 JT**
C015	LW2-C015-D	1.57 U	1.6 U	2.05 U	34.7 J	26	1.47 U	2.48 J	2.91 U	2.63 U	**63.2 JT**
C019-1	LW2-C019-B1	62.7 UJ	63.8 UJ	1010 J	870 J	2200 J	58.6 UJ	50.3 UJ	116 UJ	105 UJ	**4080 JT**
C019-1	LW2-C019-C1	1.31 UJ	1.33 UJ	58.3 J	29.7 J	8.19 J	1.22 UJ	1.05 UJ	2.43 UJ	2.19 UJ	**96.2 JT**
C020	LW2-C020-B	12.4 UJ	210 J	16.2 UJ	410 J	200 J	11.6 UJ	9.94 UJ	23 UJ	20.7 UJ	**820 JT**
C020	LW2-C020-C	25.8 UJ	950 J	33.7 UJ	629 J	1170 J	24.1 UJ	20.7 UJ	47.8 UJ	43.2 UJ	**2750 JT**
C022	LW2-C022-B	1.81 U	1.84 U	7.55 J	11.9	5.19	1.69 U	1.45 U	3.36 U	3.03 U	**24.6 JT**
C022	LW2-C022-C	1.89 U	1.92 U	11 J	20.4	12.8	1.76 U	1.51 U	3.5 U	3.16 U	**44.2 JT**
C025-1	LW2-C025-B1	1.31 UJ	1.33 UJ	1.71 UJ	0.797 UJ	1.02 UJ	1.22 UJ	1.05 UJ	2.43 UJ	2.19 UJ	**2.43 UJT**
C025-1	LW2-C025-C1	80.7 UJ	82.1 UJ	1850 J	2120 J	3200 J	75.4 UJ	64.7 UJ	149 UJ	135 UJ	**7170 JT**
C025-2	LW2-C025-D2	1.31 U	1.33 U	1.7 U	0.793 U	1.02 U	1.22 U	1.05 U	2.42 U	2.18 U	**2.42 UT**
C027	LW2-C027-B	2.74 U	2.79 U	77.9 J	20.3 J	3.39 J	2.56 U	2.2 U	5.08 U	4.59 U	**102 JT**
C027	LW2-C027-C	1.54 U	1.57 U	15.9 J	7.29 J	4.6 J	1.44 U	1.24 U	2.85 U	2.58 U	**27.8 JT**
C034	LW2-C034-B	1.33 U	13.7 J	1.74 U	13.9 J	2.97 J	1.25 U	1.07 U	2.47 U	2.23 U	**30.6 JT**
C034	LW2-C034-C	1.35 U	1.37 U	8.62 J	17 J	4.88 J	1.26 U	1.08 U	2.5 U	2.26 U	**30.5 JT**
C034	LW2-C034-E	1.34 U	1.37 U	1.75 U	4.4 J	2.21 J	1.25 U	1.08 U	2.49 U	2.25 U	**6.61 JT**
C038	LW2-C038-B	1.32 U	1.34 U	24.2 J	15.5 J	9.69 J	1.23 U	1.06 U	2.44 U	2.2 U	**49.4 JT**
C038	LW2-C038-C	1.25 U	1.27 U	1.63 U	0.762 U	0.978 U	1.17 U	1.01 U	2.32 U	2.1 U	**2.32 UT**
C038	LW2-C038-D	1.48 U	1.51 U	1.93 U	0.899 U	1.15 U	1.38 U	1.19 U	2.74 U	2.48 U	**2.74 UT**
C060	LW2-C060-B	1.71 U	1.74 U	19.3 J	63.7 J	35.3 J	1.6 U	1.37 U	3.17 U	2.86 U	**118 JT**
C060	LW2-C060-C	1.74 U	1.77 U	2.27 U	22.1 J	14.3 J	1.63 U	1.4 U	3.23 U	2.92 U	**36.4 JT**
C062	LW2-C062-B	1.27 U	1.29 U	1.65 U	0.77 U	0.989 U	1.18 U	1.02 U	2.54 UJ	2.12 U	**2.54 UJT**
C062	LW2-C062-C	1.33 U	1.36 U	1.74 U	0.81 U	1.04 U	1.24 U	1.07 U	2.47 U	2.23 U	**2.47 UT**
C062	LW2-C062-D	1.36 U	1.38 U	1.77 U	0.824 U	1.06 U	1.27 U	1.09 U	2.51 U	2.27 U	**2.51 UT**
C064	LW2-C064-B	1.68 U	1.71 U	2.19 U	1.02 U	1.31 U	1.57 U	1.35 U	3.11 U	2.81 U	**3.11 UT**
C064	LW2-C064-C	1.51 U	1.53 U	1.97 U	0.916 U	1.18 U	1.41 U	1.21 U	2.79 U	2.52 U	**2.79 UT**
C066	LW2-C066-B	1.52 U	1.54 U	1.98 U	3.8	1.18 U	1.42 U	1.22 U	2.81 U	2.54 U	**3.8 T**
C066	LW2-C066-C	1.43 U	1.46 U	1.87 U	0.871 U	1.12 U	1.34 U	1.15 U	2.65 U	2.4 U	**2.65 UT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	12674-11-2	53469-21-9	12672-29-6	11097-69-1	11096-82-5	37324-23-5	11100-14-4	11104-28-2	11141-16-5	Total
	Chemical Name	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclors
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID										
C067	LW2-C067-B	1.73 U	1.76 U	17.4 J	74.6 J	42.3 J	1.62 U	1.39 U	3.21 U	2.9 U	**134 JT**
C067	LW2-C067-D	3.42 U	3.48 U	11	126 J	2.67 U	3.2 U	17.5 J	6.34 U	5.72 U	**155 JT**
C067	LW2-C067-E	1.51 U	1.53 U	1.97	28.2	1.18 U	1.41 U	15.8 J	2.79 U	2.52 U	**46 JT**
C073	LW2-C073-B	2.7 U	2.75 U	3.52 U	15.6	11.1	2.52 U	2.16 U	5 U	4.52 U	**26.7 T**
C073	LW2-C073-C	1.45 U	1.47 U	11.7	44.3 J	17.8	1.35 U	1.16 U	2.68 U	2.42 U	**73.8 JT**
C073	LW2-C073-D	1.26 U	1.28 U	1.64 U	19.7 J	9.61 J	1.18 U	1.01 U	2.34 U	2.11 U	**29.3 JT**
C074	LW2-C074-B	1.6 U	1.63 U	2.09 U	30.8 J	12.6	1.5 U	1.29 U	2.97 U	2.68 U	**43.4 JT**
C074	LW2-C074-C	3.99 U	4.06 U	5.2 U	2.43 U	11.4 J	3.73 U	3.2 U	7.39 U	6.68 U	**11.4 JT**
C074	LW2-C074-D	1.47 U	1.49 U	1.91 U	0.891 U	1.14 U	1.37 U	1.18 U	2.72 U	2.45 U	**2.72 UT**
C074	LW2-C074-F	1.35 U	1.37 U	5.57	19.8	9.2	1.26 U	1.08 U	2.5 U	2.26 U	**34.6 T**
C077	LW2-C077-C	1.43 U	1.45 U	1.86 U	38.4 J	8.44	1.33 U	1.14 U	2.64 U	2.38 U	**46.8 JT**
C077	LW2-C077-D	1.53 U	1.56 U	2 U	0.931 U	1.19 U	1.43 U	1.23 U	2.84 U	2.56 U	**2.84 UT**
C086	LW2-C086-B	3.37 U	3.43 U	32	115	55	3.15 U	2.7 U	6.24 U	5.63 U	**202 T**
C086	LW2-C086-C	1.14 U	1.16 U	1.49 U	0.693 U	0.89 U	1.07 U	0.915 U	2.11 U	1.91 U	**2.11 UT**
C093	LW2-C093-B	23.4 U	23.8 U	472	1910	436	21.9 U	18.8 U	43.4 U	39.2 U	**2820 T**
C093	LW2-C093-C	1.34 U	1.36 U	1.75 U	0.814 U	1.04 U	1.25 U	1.07 U	2.48 U	2.24 U	**2.48 UT**
C105	LW2-C105-B	1.61 U	1.64 U	2.1 U	0.98 U	1.26 U	1.51 U	1.29 U	2.99 U	2.7 U	**2.99 UT**
C105	LW2-C105-C	1.58 U	1.6 U	2.05 U	0.958 U	1.23 U	1.47 U	1.26 U	2.92 U	2.64 U	**2.92 UT**
C111-1	LW2-C111-B	3.46 U	3.52 U	93.5	115	71.7 J	3.23 U	9.91 NJ	6.41 U	5.79 U	**290 JT**
C111-1	LW2-C111-C	1.82 U	1.85 U	52 J	74	51.3 J	1.7 U	5.47	3.36 U	3.04 U	**183 JT**
C111-1	LW2-C111-F	1.44 U	1.46 U	1.88 U	0.875 U	4.81 J	1.34 U	11.3 J	2.67 U	2.41 U	**16.1 JT**
C111-2	LW2-C111-B2	5.06 U	184	6.59 U	169	54.3	4.72 U	4.05 U	9.36 U	8.46 U	**407 T**
C111-2	LW2-C111-C2	5.21 U	5.3 U	43.6	99.1	40.6	4.87 U	4.18 U	9.65 U	8.72 U	**183 T**
C111-2	LW2-C111-E2	1.69 U	1.71 U	8.69	114	72.8	1.57 U	24.4	3.12 U	2.82 U	**220 T**
C112	LW2-C112-B	1.77 U	1.8 U	72.9	84.8	51.2 J	1.66 U	11.2	3.28 U	2.96 U	**220 JT**
C112	LW2-C112-C	3.62 U	3.68 U	58.1 NJ	113 J	80 J	3.38 U	14.5 J	6.71 U	6.06 U	**266 JT**
C112	LW2-C112-D	1.81 U	1.84 U	14.3 NJ	76.9 NJ	57.4 NJ	1.69 U	17 J	3.35 U	3.03 U	**166 JT**
C121	LW2-C121-B	1.64 U	1.67 U	10.9	40.4	21.9	1.53 U	1.32 U	3.04 U	2.74 U	**73.2 T**
C121	LW2-C121-C	1.6 U	1.62 U	2.68 J	20.9 J	13.8 J	1.49 U	1.28 U	2.95 U	2.67 U	**37.4 JT**
C122	LW2-C122-B	1.7 U	1.72 U	31.5	54.9	33.9 J	1.58 U	1.36 U	3.14 U	2.84 U	**120 JT**
C122	LW2-C122-C	1.58 U	1.6 U	2.05 U	0.958 U	45.6 J	1.47 U	1.26 U	2.92 U	2.64 U	**45.6 JT**
C130	LW2-C130-B	2.06 U	2.1 U	2.69 U	33.5	26.4	1.93 U	1.65 U	3.82 U	3.45 U	**59.9 T**
C130	LW2-C130-C	1.19 U	1.21 U	1.55 U	0.722 U	0.927 U	1.11 U	0.953 U	2.2 U	1.99 U	**2.2 UT**
C130	LW2-C130-E	1.37 U	1.39 U	1.79 U	0.832 U	1.07 U	1.28 U	1.1 U	2.54 U	2.29 U	**2.54 UT**
C133	LW2-C133-B	1.93 UJ	1.97 UJ	2.52 UJ	12.3 J	3.37 J	1.81 UJ	1.55 UJ	3.58 UJ	3.23 UJ	**15.7 JT**
C133	LW2-C133-D	1.71 UJ	1.74 UJ	70.7 J	88.5 J	42.5 J	1.6 UJ	1.37 UJ	3.17 UJ	2.86 UJ	**202 JT**
C135	LW2-C135-B	1.92 UJ	1.96 UJ	2.51 UJ	13.2 J	4.76 J	1.8 UJ	1.54 UJ	3.56 UJ	3.22 UJ	**18 JT**
C135	LW2-C135-C	1.98 UJ	2.01 UJ	11.2 J	31.1 J	14.6 J	1.85 UJ	1.58 UJ	3.66 UJ	3.31 UJ	**56.9 JT**
C136	LW2-C136-B	2.11 U	2.15 U	19.3 J	31.8 J	17.9 J	1.97 U	1.69 U	3.91 U	3.53 U	**69 JT**
C136	LW2-C136-C	2.02 U	2.05 U	55.8	109	53.6	1.88 U	1.62 U	3.73 U	3.37 U	**218 T**
C136	LW2-C136-D	1.73 U	1.76 U	2.25 U	33.6	17.7	1.61 U	1.39 U	3.2 U	2.89 U	**51.3 T**
C138	LW2-C138-C	1.27 U	1.29 U	1.65 U	0.769 U	0.988 U	1.18 U	1.02 U	2.35 U	2.12 U	**2.35 UT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No / Chemical Name / Unit	12674-11-2 Aroclor 1016 ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
Location	**Sample ID**										
C139	LW2-C139-B	1.95 U	1.98 U	2.54 U	15.9 J	7.31	1.82 U	1.56 U	3.61 U	3.26 U	**23.2 JT**
C139	LW2-C139-C	3 U	3.06 U	3.92 U	23.8	9.28	2.81 U	2.41 U	5.56 U	5.03 U	**33.1 T**
C142	LW2-C142-B	3.7 UJ	3.76 UJ	4.82 UJ	74 J	46.8 J	3.46 UJ	2.97 UJ	6.85 UJ	6.19 UJ	**121 JT**
C142	LW2-C142-C	3.5 UJ	3.56 UJ	4.56 UJ	64.3 J	23.1 J	3.27 UJ	2.81 UJ	6.48 UJ	5.85 UJ	**87.4 JT**
C147	LW2-C147-B	3.6 U	3.66 U	4.69 U	2.19 U	92.7	3.36 U	2.89 U	6.66 U	6.02 U	**92.7 T**
C147	LW2-C147-C	1.64 U	1.67 U	56.5 J	84.8	45.5	1.53 U	1.32 U	3.04 U	2.75 U	**187 JT**
C147	LW2-C147-E	3.47 U	3.53 U	4.52 U	2.11 U	37.6 J	3.24 U	2.78 U	6.43 U	5.81 U	**37.6 JT**
C155	LW2-C155-B	1.65 U	1.68 U	2.15 U	1 U	1.28 U	1.54 U	1.32 U	3.05 U	2.76 U	**3.05 UT**
C155	LW2-C155-C	1.62 U	1.64 U	2.11 U	0.983 U	1.26 U	1.51 U	1.3 U	3 U	2.71 U	**3 UT**
C157	LW2-C157-B	1.74 U	1.77 U	2.27 U	1.06 U	1.36 U	1.63 U	1.4 U	3.23 U	2.92 U	**3.23 UT**
C157	LW2-C157-C	1.59 U	1.62 U	2.07 U	0.965 U	1.24 U	1.48 U	1.27 U	2.94 U	2.66 U	**2.94 UT**
C160	LW2-C160-B	1.72 U	1.75 U	2.24 U	1.05 U	1.34 U	1.61 U	1.38 U	3.19 U	2.88 U	**3.19 UT**
C160	LW2-C160-C	1.65 U	1.68 U	2.15 U	1 U	1.29 U	1.54 U	1.32 U	3.05 U	2.76 U	**3.05 UT**
C161	LW2-C161-B	1.79 U	1.82 U	2.33 U	1.09 U	1.39 U	1.67 U	1.43 U	3.31 U	2.99 U	**3.31 UT**
C161	LW2-C161-C	1.46 U	1.49 U	1.91 U	0.889 U	1.14 U	1.37 U	1.17 U	2.71 U	2.45 U	**2.71 UT**
C163-1	LW2-C163-B1	1.23 U	1.25 U	1.6 U	0.747 U	0.958 U	1.15 U	0.986 U	2.28 U	2.06 U	**2.28 UT**
C163-1	LW2-C163-C1	1.84 U	1.87 U	2.4 U	1.12 U	1.44 U	1.72 U	1.48 U	3.41 U	3.08 U	**3.41 UT**
C163-2	LW2-C163-B2	1.15 UT	1.17 UT	1.5 UT	0.7 UT	0.899 UT	1.08 UT	0.924 UT	2.13 UT	1.93 UT	**2.13 UT**
C163-2	LW2-C163-C2	1.52 UT	1.55 UT	1.98 UT	0.924 UT	1.19 UT	1.42 UT	1.22 UT	2.82 UT	2.54 UT	**2.82 UT**
C164	LW2-C164-B	1.18 U	1.2 U	1.54 U	0.719 U	0.923 U	1.11 U	0.949 U	2.19 U	1.98 U	**2.19 UT**
C164	LW2-C164-C	1.25 UJ	1.27 UJ	1.63 UJ	1.95 J	0.976 UJ	1.17 UJ	1 UJ	2.32 UJ	2.09 UJ	**1.95 JT**
C164	LW2-C164-E	3.24 UJ	3.3 UJ	92.2 J	134 J	80.2 J	3.03 UJ	2.6 UJ	6 UJ	5.42 UJ	**306 JT**
C166	LW2-C166-B	1.45 U	1.47 U	1.89 U	5.8 J	1.96 J	1.35 U	1.16 U	2.68 U	2.42 U	**7.76 JT**
C166	LW2-C166-C	1.6 UJ	1.63 UJ	48.2 J	59.5 J	35.7 J	1.5 UJ	1.29 UJ	2.97 UJ	2.68 UJ	**143 JT**
C166	LW2-C166-D	1.54 U	1.56 U	11.2 J	73.3 J	49.2 J	1.43 U	1.23 U	2.84 U	2.57 U	**134 JT**
C170	LW2-C170-B	1.57 U	1.6 U	2.05 U	3.14 U	1.22 U	1.47 U	3.14 U	2.91 U	2.63 U	**3.14 UT**
C170	LW2-C170-C	1.3 U	1.33 U	1.7 U	0.792 U	1.02 U	1.22 U	1.05 U	2.41 U	2.18 U	**2.41 UT**
C171	LW2-C171-B	2.04 U	2.08 U	19.2 J	45.5	25.8	1.91 U	1.64 U	3.78 U	3.42 U	**90.5 JT**
C171	LW2-C171-C	1.53 U	1.55 U	35.5 J	39.6	22.5 J	1.43 U	1.22 U	2.83 U	2.55 U	**97.6 JT**
C172	LW2-C172-B	1.82 U	1.85 U	2.37 U	12.5 J	9.4 J	1.7 U	1.46 U	3.37 U	3.05 U	**21.9 JT**
C172	LW2-C172-C	4.57 U	111	5.95 U	69.6	25.8 J	4.27 U	3.66 U	8.46 U	7.64 U	**206 JT**
C176	LW2-C176-B	1.93 U	1.96 U	2.52 U	22.7 J	9.94	1.8 U	1.55 U	3.58 U	3.23 U	**32.6 JT**
C176	LW2-C176-C	1.45 U	1.48 U	1.89 U	0.882 U	1.13 U	1.36 U	1.16 U	2.69 U	2.43 U	**2.69 UT**
C176	LW2-C176-G	1.33 U	1.35 U	1.73 U	0.808 U	1.04 U	1.24 U	1.07 U	2.46 U	2.22 U	**2.46 UT**
C179	LW2-C179-B	1.72 U	1.75 U	2.25 U	56 J	33.9 J	1.61 U	1.38 U	3.19 U	2.88 U	**89.9 JT**
C179	LW2-C179-C	1.77 U	1.8 U	2.31 U	1.08 U	2.08 J	1.66 U	1.64 J	3.28 U	2.96 U	**3.72 JT**
C179	LW2-C179-D	1.63 U	1.66 U	2.12 U	0.99 U	1.27 U	1.52 U	1.31 U	3.02 U	2.72 U	**3.02 UT**
C182	LW2-C182-B	3.05 U	64.3	3.97 U	80.3	32.8	2.85 U	2.44 U	5.64 U	5.1 U	**177 T**
C182	LW2-C182-C	1.75 U	1.77 U	18.8 J	56.1	41.3 J	1.63 U	1.4 U	3.23 U	2.92 U	**116 JT**
C184	LW2-C184-B	1.72 U	1.75 U	75.3 J	96.4 J	47.2 J	1.6 U	1.38 U	3.18 U	2.87 U	**219 JT**
C184	LW2-C184-C	1.6 U	1.62 U	32.1 J	88.5 J	37	1.49 U	1.28 U	2.96 U	2.67 U	**158 JT**
C184	LW2-C184-D	1.46 U	1.48 U	1.9 U	0.885 U	1.14 U	1.36 U	1.17 U	2.7 U	2.44 U	**2.7 UT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	12674-11-2	53469-21-9	12672-29-6	11097-69-1	11096-82-5	37324-23-5	11100-14-4	11104-28-2	11141-16-5	Total
	Chemical Name	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclors
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID										
C192	LW2-C192-B	1.65 U	1.68 U	24.3	78.8	37	1.54 U	5.43	3.06 U	2.76 U	**146 T**
C192	LW2-C192-C	1.66 U	1.69 U	8.08 J	78.6 J	72.5 J	1.55 U	54 J	3.08 U	2.78 U	**213 JT**
C192	LW2-C192-D	1.3 U	1.32 U	1.69 U	0.787 U	1.01 U	1.21 U	1.04 U	2.4 U	2.17 U	**2.4 UT**
C197	LW2-C197-B	1.85 U	1.88 U	27.4 J	87.1 J	47.2	1.73 U	16.5	3.42 U	3.09 U	**178 JT**
C197	LW2-C197-C	10.7 U	10.9 U	14 U	6.51 U	170 J	10 U	70.2 J	19.9 U	17.9 U	**240 JT**
C197	LW2-C197-D	1.18 U	1.2 U	1.54 U	0.716 U	0.919 U	1.1 U	0.944 U	2.18 U	1.97 U	**2.18 UT**
C199	LW2-C199-B	1.58 U	1.61 U	14.1 J	68.9 J	38.5 J	1.48 U	72.3 J	2.93 U	2.65 U	**194 JT**
C199	LW2-C199-C	1.47 U	1.49 U	1.91 U	0.892 U	1.14 U	1.37 U	1.18 U	2.72 U	2.46 U	**2.72 UT**
C202	LW2-C202-B	3.59 U	3.65 U	72.7	212 J	94.5 J	3.35 U	27.1 J	6.65 U	6 U	**406 JT**
C202	LW2-C202-C	1.81 U	1.84 U	45.4 J	47.6 J	84.3 J	1.69 U	192 J	3.35 U	3.03 U	**369 JT**
C203	LW2-C203-B	1.75 U	1.78 U	18.1 J	61.1 J	73.4 J	1.64 U	74.8 J	3.25 U	2.93 U	**227 JT**
C203	LW2-C203-C	8.69 U	8.83 U	202 J	545 J	149 J	8.11 U	209 J	16.1 U	14.5 U	**1110 JT**
C203	LW2-C203-E	1.46 U	1.48 U	1.9 U	0.886 U	1.14 U	1.36 U	36.4 J	2.7 U	2.44 U	**36.4 JT**
C206	LW2-C206-B	11.5 U	11.7 U	131 J	368 J	131 J	10.7 U	38.2	21.3 U	19.2 U	**668 JT**
C206	LW2-C206-C	1.18 U	1.2 U	1.54 U	0.716 U	0.919 U	1.1 U	0.945 U	2.18 U	1.97 U	**2.18 UT**
C207-1	LW2-C207-B	1.76 U	1.79 U	18.8 J	50.7 J	98.8 J	1.64 U	474 J	3.26 U	2.95 U	**642 JT**
C207-1	LW2-C207-C	1.43 U	1.45 U	1.86 U	0.867 U	1.11 U	1.33 U	1.14 U	2.64 U	2.39 U	**2.64 UT**
C207-1	LW2-C207-D	1.57 U	1.59 U	2.04 U	0.953 U	1.22 U	1.46 U	1.26 U	2.9 U	2.62 U	**2.9 UT**
C207-2	LW2-C207-B2	1.75 UT	1.78 UT	2.92 JT	31.3 JT	18 JT	1.63 UT	180 JT	3.23 UT	2.92 UT	**232 JT**
C207-2	LW2-C207-C2	1.47 UT	1.5 UT	1.92 UT	0.894 UT	1.15 UT	1.37 UT	1.18 UT	2.73 UT	2.46 UT	**2.73 UT**
C210	LW2-C210-B	1.39 U	1.42 U	1.82 U	0.846 U	1.09 U	1.3 U	1.12 U	2.58 U	2.33 U	**2.58 UT**
C210	LW2-C210-C	1.3 U	1.33 U	1.7 U	0.792 U	1.02 U	1.22 U	1.05 U	2.42 U	2.18 U	**2.42 UT**
C213	LW2-C213-B	1.27 U	1.29 U	1.65 U	0.769 U	0.987 U	1.18 U	1.02 U	2.34 U	2.12 U	**2.34 UT**
C213	LW2-C213-C	1.37 U	1.39 U	1.78 U	0.831 U	1.07 U	1.28 U	1.1 U	2.53 U	2.29 U	**2.53 UT**
C213	LW2-C213-D	1.35 U	1.37 U	1.76 U	0.821 U	1.05 U	1.26 U	1.08 U	2.5 U	2.26 U	**2.5 UT**
C220	LW2-C220-B	1.3 U	1.32 U	1.69 U	0.79 U	1.01 U	1.21 U	1.04 U	2.41 U	2.17 U	**2.41 UT**
C220	LW2-C220-C	1.41 U	1.43 U	1.83 U	0.854 U	1.1 U	1.31 U	1.13 U	2.6 U	2.35 U	**2.6 UT**
C221	LW2-C221-B	1.36 U	1.38 U	1.77 U	0.824 U	8.99 J	1.27 U	1.09 U	2.51 U	2.27 U	**8.99 JT**
C221	LW2-C221-C	1.38 U	1.4 U	1.8 U	0.838 U	1.08 U	1.29 U	1.11 U	2.55 U	2.31 U	**2.55 UT**
C228	LW2-C228-B	1.52 UJ	1.55 UJ	1.98 UJ	21.7 J	14.3 J	1.42 UJ	1.22 UJ	2.82 UJ	2.54 UJ	**36 JT**
C231	LW2-C231-B	1.68 U	1.71 U	2.19 U	1.02 U	2.83 J	1.57 U	3.27 J	3.12 U	2.81 U	**6.1 JT**
C231	LW2-C231-C	2.76 U	2.81 U	5.54 U	5.54 U	30.5 J	2.58 U	2.22 U	5.12 U	4.62 U	**30.5 JT**
C232	LW2-C232-B	1.19 U	1.21 U	1.55 U	0.725 U	0.93 U	1.11 U	0.957 U	2.21 U	2 U	**2.21 UT**
C232	LW2-C232-C	1.35 U	1.37 U	1.76 U	0.82 U	1.05 U	1.26 U	1.08 U	2.5 U	2.26 U	**2.5 UT**
C240	LW2-C240-B	3.56 UJ	3.62 UJ	26.5 J	21.8 J	15.3 J	3.32 UJ	2.85 UJ	6.59 UJ	5.95 UJ	**63.6 JT**
C240	LW2-C240-D	16.2 UJ	16.2 UJ	16.2 UJ	16.2 UJ	39.5 J	16.2 UJ	16.2 UJ	16.2 UJ	16.2 UJ	**39.5 JT**
C240	LW2-C240-E	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	3.3 UJ	**3.3 UJT**
C244	LW2-C244-B	1.73 U	1.76 U	17.8	80.3 J	34.7	1.62 U	1.39 U	3.21 U	2.9 U	**133 JT**
C244	LW2-C244-C	2 U	2.03 U	62.8	108 J	48	1.87 U	1.6 U	3.7 U	3.34 U	**219 JT**
C245	LW2-C245-B	1.7 U	1.73 U	27.7 J	42 J	23.1 J	1.59 U	1.36 U	3.4 U	2.84 U	**92.8 JT**
C245	LW2-C245-C	1.42 U	1.45 U	1.86 U	0.866 U	1.11 U	1.33 U	1.14 U	2.64 U	2.38 U	**2.64 UT**
C245	LW2-C245-D	1.67 U	1.7 U	2.17 U	1.01 U	1.3 U	1.56 U	1.34 U	3.09 U	2.79 U	**3.09 UT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	CAS No 12674-11-2 Chemical Name Aroclor 1016 Unit ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
C245	LW2-C245-E	1.46 U	1.49 U	1.9 U	0.888 U	1.14 U	1.36 U	1.17 U	2.71 U	2.44 U	**2.71 UT**
C247	LW2-C247-B	1.41 U	1.43 U	1.83 U	0.854 U	1.1 U	1.31 U	1.13 U	2.6 U	2.35 U	**2.6 UT**
C247	LW2-C247-C	1.34 U	1.36 U	1.74 U	0.812 U	1.04 U	1.25 U	1.07 U	2.48 U	2.24 U	**2.48 UT**
C247	LW2-C247-D	1.41 U	1.44 U	1.84 U	0.86 U	1.1 U	1.32 U	1.13 U	2.62 U	2.37 U	**2.62 UT**
C252	LW2-C252-B	1.28 U	1.3 U	1.66 U	0.775 U	0.995 U	1.19 U	1.02 U	2.36 U	2.13 U	**2.36 UT**
C252	LW2-C252-C	1.66 U	1.69 U	6.76	15.4	2.03 J	1.55 U	1.33 U	3.08 U	2.78 U	**24.2 JT**
C254	LW2-C254-B	2.15 U	2.18 U	25.1 J	137 J	63.2 J	2 U	1.72 U	3.98 U	3.59 U	**225 JT**
C254	LW2-C254-C	1.09 U	1.11 U	1.42 U	0.663 U	0.851 U	1.02 U	0.875 U	2.02 U	1.83 U	**2.02 UT**
C255	LW2-C255-B	1.26 U	1.28 U	1.64 U	0.766 U	0.983 U	1.18 U	1.01 U	2.33 U	2.11 U	**2.33 UT**
C255	LW2-C255-C	1.17 U	1.19 U	1.52 U	0.709 U	0.91 U	1.09 U	0.935 U	2.16 U	1.95 U	**2.16 UT**
C257	LW2-C257-B	3.83 U	3.89 U	131	141 J	83.5 J	3.57 U	3.07 U	7.09 U	6.4 U	**356 JT**
C258	LW2-C258-B	1.36 U	1.38 U	1.77 U	0.825 U	1.06 U	1.27 U	1.09 U	2.51 U	2.27 U	**2.51 UT**
C258	LW2-C258-C	1.33 UJ	1.35 UJ	1.73 UJ	0.808 UJ	2.45 J	1.24 UJ	1.07 UJ	2.46 UJ	2.23 UJ	**2.45 JT**
C260	LW2-C260-B	1.26 U	1.28 U	1.64 U	0.766 U	0.983 U	1.18 U	1.01 U	2.34 U	2.11 U	**2.34 UT**
C260	LW2-C260-C	3.2 U	3.25 U	4.17 U	1.94 U	2.49 U	2.99 U	2.56 U	6.4 U	5.35 U	**6.4 UT**
C263	LW2-C263-B	12.2 U	12.4 U	15.9 U	7.39 U	164	11.4 U	9.76 U	22.5 U	20.4 U	**164 T**
C263	LW2-C263-D	3.68 U	3.74 U	4.79 U	7.36 U	2.87 U	3.43 U	2.95 U	7.36 U	6.15 U	**7.36 UT**
C264	LW2-C264-B	17.1 UJ	17.4 UJ	22.3 UJ	10.4 UJ	13.4 UJ	16 UJ	13.7 UJ	31.7 UJ	28.7 UJ	**31.7 UJT**
C264	LW2-C264-C	1.53 UJ	1.55 UJ	20.7 J	29.1 J	1.19 UJ	1.43 UJ	1.23 UJ	2.83 UJ	2.56 UJ	**49.8 JT**
C266	LW2-C266-B	1.16 U	1.18 U	1.51 U	0.704 U	0.904 U	1.08 U	0.93 U	2.15 U	1.94 U	**2.15 UT**
C266	LW2-C266-C	1.6 U	1.62 U	55.2 J	16.9	7.37	1.49 U	1.28 U	2.96 U	2.67 U	**79.5 JT**
C267	LW2-C267-B	1.79 U	1.82 U	26 J	69.1	48.3 J	1.67 U	1.43 U	3.31 U	2.99 U	**143 JT**
C267	LW2-C267-C	1.14 U	1.16 U	1.48 U	0.691 U	0.887 U	1.06 U	0.912 U	2.11 U	1.9 U	**2.11 UT**
C268	LW2-C268-B	1.28 U	1.31 U	1.67 U	0.781 U	1 U	1.2 U	1.03 U	2.38 U	2.15 U	**2.38 UT**
C268	LW2-C268-C	1.09 U	1.11 U	1.42 U	0.662 U	0.85 U	1.02 U	0.874 U	2.02 U	1.82 U	**2.02 UT**
C269	LW2-C269-B	3.84 U	3.91 U	7.69 U	7.69 U	20.9	3.59 U	3.08 U	7.11 U	6.42 U	**20.9 T**
C269	LW2-C269-C	3.54 U	3.6 U	7.08 U	126 J	92.7 J	3.3 U	2.84 U	6.55 U	5.92 U	**219 JT**
C269	LW2-C269-F	1.6 U	1.62 U	2.08 U	0.969 U	1.24 U	1.49 U	1.28 U	2.95 U	2.67 U	**2.95 UT**
C270	LW2-C270-B	184 UJ	184 UJ	184 UJ	184 UJ	184 UJ	184 UJ	184 UJ	184 UJ	184 UJ	**184 UJT**
C270	LW2-C270-C	23.7 UJ	23.7 UJ	23.7 UJ	23.7 UJ	23.7 UJ	23.7 UJ	23.7 UJ	23.7 UJ	23.7 UJ	**23.7 UJT**
C272	LW2-C272-B	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	2.5 UJ	**2.5 UJT**
C272	LW2-C272-C	1.15 UJ	1.17 UJ	1.5 UJ	2.31 UJ	2.31 UJ	2.31 UJ	2.31 UJ	2.13 UJ	1.93 UJ	**2.31 UJT**
C273	LW2-C273-B	1.93 UJ	1.96 UJ	2.51 UJ	1.17 UJ	1.5 UJ	1.8 UJ	1.55 UJ	3.57 UJ	3.22 UJ	**3.57 UJT**
C273	LW2-C273-C	1.66 U	1.69 U	2.16 U	1.01 U	1.3 U	1.55 U	1.33 U	3.08 U	2.78 U	**3.08 UT**
C276	LW2-C276-B	3.71 U	3.78 U	82.3 J	104 J	66.9 J	3.47 U	2.98 U	7.44 U	6.21 U	**253 JT**
C276	LW2-C276-C	1.4 UJ	1.43 UJ	1.83 UJ	0.852 UJ	1.09 UJ	1.31 UJ	1.12 UJ	2.81 UJ	2.35 UJ	**2.81 UJT**
C277	LW2-C277-B	2.01 U	2.05 U	42.1 J	97.8 J	70.4 J	1.88 U	1.61 U	3.73 U	3.37 U	**210 JT**
C277	LW2-C277-C	1.8 U	1.84 U	67 J	112 J	87.7 J	1.69 U	1.45 U	3.34 U	3.02 U	**267 JT**
C277	LW2-C277-D	3.51 U	3.57 U	84.9 J	163 J	97.1 J	3.28 U	2.81 U	6.5 U	5.87 U	**345 JT**
C278	LW2-C278-B	1.96 UJ	2 UJ	2.56 UJ	36.1 J	21.4 J	1.83 UJ	1.58 UJ	3.64 UJ	3.29 UJ	**57.5 JT**
C278	LW2-C278-C	1.66 UJ	1.68 UJ	2.16 UJ	43.6 J	27.3 J	1.55 UJ	1.33 UJ	3.31 UJ	2.77 UJ	**70.9 JT**
C278	LW2-C278-D	1.35 U	1.37 U	1.76 U	0.82 U	1.05 U	1.26 U	1.08 U	2.7 U	2.26 U	**2.7 UT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	12674-11-2 Aroclor 1016 ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
Location	**Sample ID**										
C280	LW2-C280-B	1.78 U	1.81 U	2.32 U	1.08 U	1.39 U	1.66 U	1.43 U	3.3 U	2.98 U	**3.3 UT**
C280	LW2-C280-C	1.54 U	1.57 U	2.01 U	0.937 U	1.2 U	1.44 U	1.24 U	2.85 U	2.58 U	**2.85 UT**
C280	LW2-C280-D	1.36 U	1.39 U	1.78 U	0.829 U	1.06 U	1.27 U	1.09 U	2.53 U	2.28 U	**2.53 UT**
C282	LW2-C282-B	1.18 U	1.2 U	1.54 U	0.717 U	0.921 U	1.1 U	0.947 U	2.19 U	1.97 U	**2.19 UT**
C282	LW2-C282-C	1.15 U	1.17 U	1.5 U	0.7 U	0.898 U	1.08 U	0.923 U	2.13 U	1.93 U	**2.13 UT**
C282	LW2-C282-D	1.22 U	1.25 U	1.6 U	0.744 U	0.955 U	1.14 U	0.982 U	2.27 U	2.05 U	**2.27 UT**
C283	LW2-C283-B	7.33 U	7.46 U	9.56 U	14.7 UJ	105 J	6.85 U	5.88 U	13.6 U	12.3 U	**105 JT**
C283	LW2-C283-C	1.58 U	1.61 U	2.06 U	0.961 U	1.23 U	1.48 U	1.27 U	2.93 U	2.65 U	**2.93 UT**
C283	LW2-C283-E	1.35 UJ	1.37 UJ	1.76 UJ	0.821 UJ	1.05 UJ	1.26 UJ	1.08 UJ	2.5 UJ	2.26 UJ	**2.5 UJT**
C284	LW2-C284-B	1.93 UJ	1.96 UJ	36.1 J	57.4 J	34.4 J	1.8 UJ	1.55 UJ	3.58 UJ	3.23 UJ	**128 JT**
C284	LW2-C284-C	3.09 UJ	3.15 UJ	4.03 UJ	1.88 UJ	2.41 UJ	2.89 UJ	2.48 UJ	6.2 UJ	5.18 UJ	**6.2 UJT**
C284	LW2-C284-D	1.35 U	1.37 U	1.76 U	0.82 U	1.05 U	1.26 U	1.08 U	2.5 U	2.26 U	**2.5 UT**
C288	LW2-C288-B	1.92 UJ	1.96 UJ	12.6 J	26.5 J	20.5 J	1.8 UJ	1.54 UJ	3.56 UJ	3.22 UJ	**59.6 JT**
C288	LW2-C288-C	1.79 U	1.82 U	2.33 U	1.09 U	1.4 U	1.67 U	1.44 U	3.32 U	3 U	**3.32 UT**
C288	LW2-C288-D	1.67 U	1.7 U	2.18 U	1.01 U	1.3 U	1.56 U	1.34 U	3.09 U	2.79 U	**3.09 UT**
C293-1	LW2-C293-B	2.18 U	2.22 U	77.4 J	105	144 J	2.03 U	1.75 U	4.04 U	3.64 U	**326 JT**
C293-1	LW2-C293-C	1.85 U	1.89 U	21.3 J	164 J	159 J	1.73 U	1.49 U	3.43 U	3.1 U	**344 JT**
C293-1	LW2-C293-D	1.71 U	1.74 U	2.22 U	1.04 U	1.33 U	1.59 U	1.37 U	3.16 U	2.86 U	**3.16 UT**
C293-2	LW2-C293-B2	4.1 U	4.17 U	72.7 J	188 J	142 J	3.83 U	3.29 U	7.6 U	6.86 U	**403 JT**
C293-2	LW2-C293-C2	1.82 U	1.85 U	2.37 U	1.1 U	1.42 U	1.7 U	1.46 U	3.37 U	3.04 U	**3.37 UT**
C294	LW2-C294-B	1.76 UJ	1.79 UJ	2.29 UJ	1.07 UJ	38.8 J	1.64 UJ	1.41 UJ	3.52 UJ	2.94 UJ	**38.8 JT**
C294	LW2-C294-C	1.72 U	1.75 U	2.24 U	1.04 U	1.34 U	1.61 U	1.38 U	3.18 U	2.88 U	**3.18 UT**
C294	LW2-C294-D	1.49 U	1.52 U	1.95 U	0.907 U	1.16 U	1.39 U	1.2 U	2.77 U	2.5 U	**2.77 UT**
C295	LW2-C295-B	1.99 U	2.02 U	30.5 J	67.5	43.1 J	1.86 U	1.59 U	3.68 U	3.33 U	**141 JT**
C295	LW2-C295-C	14.4 U	14.7 U	18.8 U	8.78 U	85.7 J	13.5 U	11.6 U	26.7 U	24.2 U	**85.7 JT**
C301	LW2-C301-B	5.01 U	5.09 U	6.53 U	10 UJ	3.9 U	4.68 U	4.02 U	9.27 U	8.38 U	**10 UJT**
C301	LW2-C301-C	13.9 U	14.1 U	18.1 U	8.43 U	10.8 U	13 U	11.1 U	25.7 U	23.2 U	**25.7 UT**
C301	LW2-C301-D	1.29 U	1.31 U	1.68 U	0.785 U	1.01 U	1.21 U	1.04 U	2.39 U	2.16 U	**2.39 UT**
C301	LW2-C301-E	6.8 U	6.92 U	8.87 U	4.13 U	5.3 U	6.35 U	5.45 U	12.6 U	11.4 U	**12.6 UT**
C301	LW2-C301-G	1.56 U	1.59 U	2.03 U	0.948 U	1.22 U	1.46 U	1.25 U	2.89 U	2.61 U	**2.89 UT**
C302	LW2-C302-B	20.1 UJ	20.1 UJ	120 J	20.1 UJ	98.8 J	20.1 UJ	20.1 UJ	20.1 UJ	20.1 UJ	**219 JT**
C302	LW2-C302-C	846 UJ	846 UJ	846 UJ	846 UJ	846 UJ	846 UJ	846 UJ	846 UJ	846 UJ	**846 UJT**
C305-1	LW2-C305-B1	5.16 U	5.25 U	38 J	82.9 J	48.7 J	4.82 U	4.14 U	10.3 U	8.63 U	**170 JT**
C305-1	LW2-C305-C1	1.38 U	1.4 U	1.8 U	0.839 U	1.08 U	1.29 U	1.11 U	2.77 U	2.31 U	**2.77 UT**
C305-1	LW2-C305-D1	1.33 U	1.35 U	1.74 U	0.809 U	1.04 U	1.24 U	1.07 U	2.47 U	2.23 U	**2.47 UT**
C305-2	LW2-C305-B2	1.65 UJ	1.67 UJ	20.8 J	50.5 J	27.3 J	1.54 UJ	1.32 UJ	3.05 UJ	2.75 UJ	**98.6 JT**
C305-2	LW2-C305-C2	1.62 U	1.65 U	5.99 J	62.5 J	42.7 J	1.52 U	1.3 U	3 U	2.71 U	**111 JT**
C305-2	LW2-C305-D2	1.25 U	1.27 U	1.63 U	0.76 U	0.976 U	1.17 U	1 U	2.51 U	2.09 U	**2.51 UT**
C311	LW2-C311-B	1.78 U	1.81 U	2.32 U	3.57 U	24.1 J	1.67 U	1.43 U	3.3 U	2.98 U	**24.1 JT**
C311	LW2-C311-C	1.79 U	1.83 U	2.34 U	1.09 U	1.4 U	1.68 U	1.44 U	3.32 U	3 U	**3.32 UT**
C311	LW2-C311-E	1.54 U	1.56 U	2 U	0.935 U	1.2 U	1.44 U	1.23 U	2.85 U	2.57 U	**2.85 UT**
C313	LW2-C313-B	1.34 U	1.36 U	1.9 J	0.814 U	1.04 U	1.25 U	1.07 U	2.48 U	2.24 U	**1.9 JT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	12674-11-2 Aroclor 1016 ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
Location	Sample ID										
C313	LW2-C313-C	1.44 U	1.47 U	1.88 U	0.876 U	1.12 U	1.35 U	1.16 U	2.67 U	2.41 U	**2.67 UT**
C314	LW2-C314-B	2.06 U	2.09 U	38.3	51.5	32.8 J	1.92 U	1.65 U	3.81 U	3.44 U	**123 JT**
C314	LW2-C314-C	1.77 U	1.8 U	30.5 J	77.3 J	40	1.65 U	1.42 U	3.28 U	2.96 U	**148 JT**
C316	LW2-C316-B	1.67 UJ	1.7 UJ	36.4 J	44.8 J	27.3 J	1.56 UJ	1.34 UJ	3.09 UJ	2.79 UJ	**109 JT**
C316	LW2-C316-C	1.68 U	1.71 U	130 J	138 J	53.7 J	1.57 U	1.35 U	3.36 U	2.81 U	**322 JT**
C316	LW2-C316-D	1.68 U	1.71 U	2.2 U	1.02 U	75.2 J	1.57 U	1.35 U	3.12 U	2.82 U	**75.2 JT**
C323	LW2-C323-B	3.01 U	3.06 U	38.5 J	104 J	98.8 J	2.81 U	2.41 U	5.57 U	5.03 U	**241 JT**
C323	LW2-C323-C	1.41 U	1.43 U	12.3 J	20.1 J	20.8 J	1.31 U	1.13 U	2.61 U	2.35 U	**53.2 JT**
C323	LW2-C323-D	1.32 U	1.34 U	8.41	19.3	9.26	1.23 U	1.06 U	2.44 U	2.21 U	**37 T**
C324	LW2-C324-B	1.48 U	1.51 U	41.2	60.4	46.9 J	1.38 U	1.19 U	2.74 U	2.48 U	**149 JT**
C324	LW2-C324-D	1.41 U	1.44 U	8.52 J	37.1	24.1 J	1.32 U	1.13 U	2.62 U	2.36 U	**69.7 JT**
C324	LW2-C324-E	1.53 U	1.55 U	24.6	75.4	53.9	1.43 U	1.23 U	2.83 U	2.56 U	**154 T**
C326	LW2-C326-B	1.84 U	1.87 U	70.2	94.9	64.2 J	1.72 U	1.48 U	3.41 U	3.08 U	**229 JT**
C326	LW2-C326-C	1.27 U	1.29 U	1.65 U	1.84 J	0.989 U	1.18 U	1.02 U	2.35 U	2.12 U	**1.84 JT**
C327	LW2-C327-B	1.29 U	1.32 U	13.5 J	36.7	23.9 J	1.21 U	1.04 U	2.4 U	2.17 U	**74.1 JT**
C327	LW2-C327-C	1.4 U	1.43 U	45.5 J	121	44.8 J	1.31 U	1.12 U	2.6 U	2.35 U	**211 JT**
C329	LW2-C329-B	1.33 U	1.36 U	1.74 U	13.9 J	5.64 J	1.24 U	1.07 U	2.47 U	2.23 U	**19.5 JT**
C329	LW2-C329-C	4.38 U	4.45 U	52.9 J	119	20.7	4.09 U	3.51 U	8.11 U	7.33 U	**193 JT**
C329	LW2-C329-D	1.37 U	1.39 U	1.78 U	0.831 U	1.07 U	1.28 U	1.1 U	2.53 U	2.29 U	**2.53 UT**
C331	LW2-C331-B	1.22 U	1.24 U	1.59 U	6.6	5.29 NJ	1.14 U	0.98 U	2.26 U	2.04 U	**11.9 JT**
C331	LW2-C331-C	1.31 U	1.33 U	1.71 U	0.797 U	1.02 U	1.23 U	1.05 U	2.43 U	2.2 U	**2.43 UT**
C331	LW2-C331-D	1.39 U	1.41 U	1.81 U	0.845 U	1.08 U	1.3 U	1.11 U	2.57 U	2.33 U	**2.57 UT**
C331	LW2-C331-E	1.41 U	1.43 U	1.83 U	0.854 U	1.1 U	1.31 U	1.13 U	2.6 U	2.35 U	**2.6 UT**
C332	LW2-C332-B	1.88 UJ	1.91 UJ	2.44 UJ	1.14 UJ	1.46 UJ	1.75 UJ	1.5 UJ	3.47 UJ	3.14 UJ	**3.47 UJT**
C332	LW2-C332-C	1.28 U	1.3 U	1.67 U	0.777 U	0.998 U	1.19 U	1.03 U	2.37 U	2.14 U	**2.37 UT**
C333	LW2-C333-B	1.41 UJ	1.44 UJ	1.84 U	0.858 U	1.1 U	1.32 U	1.13 U	2.62 UJ	2.36 UJ	**2.62 UJT**
C333	LW2-C333-C	1.25 U	1.27 U	1.63 U	0.759 U	0.974 U	1.17 U	1 U	2.31 U	2.09 U	**2.31 UT**
C333	LW2-C333-E	1.43 U	1.45 U	1.86 U	0.867 U	1.11 U	1.33 U	1.14 U	2.64 U	2.39 U	**2.64 UT**
C334	LW2-C334-B	1.79 U	1.82 U	2.33 U	1.09 U	1.4 U	1.67 U	1.43 U	3.31 U	2.99 U	**3.31 UT**
C334	LW2-C334-C	1.38 U	1.4 U	1.8 U	0.838 U	1.08 U	1.29 U	1.11 U	2.55 U	2.31 U	**2.55 UT**
C335	LW2-C335-B	1.33 U	1.35 U	1.73 U	0.806 U	1.03 U	1.24 U	1.06 U	2.65 UJ	2.22 U	**2.65 UJT**
C335	LW2-C335-C	1.11 U	1.12 U	1.44 U	0.672 U	0.862 U	1.03 U	0.887 U	2.05 U	1.85 U	**2.05 UT**
C342	LW2-C342-B	1.93 U	1.97 U	20	96.3 J	44.8 J	1.8 U	1.55 U	3.58 U	3.23 U	**161 JT**
C342	LW2-C342-C	3.41 U	3.47 U	52	128 J	81.7 J	3.19 U	2.74 U	6.32 U	5.71 U	**262 JT**
C342	LW2-C342-D	1.37 U	1.39 U	1.79 U	0.833 U	1.07 U	1.28 U	1.1 U	2.54 U	2.29 U	**2.54 UT**
C346	LW2-C346-B	1.59 UJ	1.61 UJ	2.07 UJ	15.6 J	8.82 J	1.48 UJ	1.27 UJ	2.94 UJ	2.65 UJ	**24.4 JT**
C346	LW2-C346-C	1.59 U	1.62 U	2.07 U	0.966 U	1.24 U	1.49 U	1.28 U	2.95 U	2.66 U	**2.95 UT**
C347	LW2-C347-B	2.22 U	2.26 U	2.89 U	29.1	22.8	2.07 U	1.78 U	4.11 U	3.71 U	**51.9 T**
C347	LW2-C347-C	1.91 U	1.94 U	61	116 J	76.9 J	1.78 U	1.53 U	3.53 U	3.19 U	**254 JT**
C347	LW2-C347-F	1.48 U	1.5 U	1.93 U	0.898 U	1.15 U	1.38 U	1.18 U	2.74 U	2.47 U	**2.74 UT**
C348	LW2-C348-B	35.8 U	36.4 U	46.7 U	21.7 U	27.9 U	33.4 U	28.7 U	71.7 U	59.9 U	**71.7 UT**
C348	LW2-C348-C	1.76 U	1.79 U	3.52 U	3.52 U	1.37 U	1.64 U	1.41 U	3.26 U	2.94 U	**3.52 UT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	12674-11-2	53469-21-9	12672-29-6	11097-69-1	11096-82-5	37324-23-5	11100-14-4	11104-28-2	11141-16-5	Total
	Chemical Name	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclors
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID										
C348	LW2-C348-D	1.3 U	1.32 U	1.69 U	2.59 U	1.01 U	1.21 U	1.04 U	2.4 U	2.17 U	**2.59 UT**
C351	LW2-C351-B	1.92 U	1.95 U	3.85 U	3.85 U	47.3 J	1.79 U	1.54 U	3.56 U	3.21 U	**47.3 JT**
C351	LW2-C351-C	1.26 U	1.28 U	1.64 U	0.763 U	0.979 U	1.17 U	1.01 U	2.32 U	2.1 U	**2.32 UT**
C351	LW2-C351-D	1.28 U	1.3 U	1.66 U	0.776 U	0.996 U	1.19 U	1.02 U	2.37 U	2.14 U	**2.37 UT**
C351	LW2-C351-E	1.27 U	1.29 U	1.65 U	0.771 U	0.99 U	1.19 U	1.02 U	2.35 U	2.12 U	**2.35 UT**
C352	LW2-C352-B	1.84 U	1.87 U	2.4 U	1.12 U	1.44 U	1.72 U	1.48 U	3.41 U	3.08 U	**3.41 UT**
C352	LW2-C352-C	1.71 U	1.74 U	33.7	72.8 J	49.1 J	1.6 U	1.37 U	3.17 U	2.86 U	**156 JT**
C352	LW2-C352-D	1.19 U	1.21 U	1.55 U	4.45 J	0.925 U	1.11 U	0.951 U	2.2 U	1.98 U	**4.45 JT**
C359	LW2-C359-B	1.82 U	1.85 U	2.37 U	18.5	9.89 J	1.7 U	1.46 U	3.37 U	3.04 U	**28.4 JT**
C359	LW2-C359-C	1.81 U	1.84 U	48.5 J	48.5	28.1 J	1.69 U	1.45 U	3.35 U	3.02 U	**125 JT**
C359	LW2-C359-D	3.35 UJ	3.41 UJ	4.37 UJ	2.04 UJ	94.4 J	3.13 UJ	2.69 UJ	6.2 UJ	5.6 UJ	**94.4 JT**
C362	LW2-C362-B	1.85 U	1.89 U	2.42 U	1.13 U	1.45 U	1.73 U	1.49 U	3.43 U	3.1 U	**3.43 UT**
C362	LW2-C362-C	1.76 U	1.79 U	24 J	24.9 J	7.71	1.65 U	1.41 U	3.26 U	2.95 U	**56.6 JT**
C362	LW2-C362-D	1.81 U	1.84 U	2.35 U	1.1 U	1.41 U	1.69 U	1.45 U	3.62 U	3.02 U	**3.62 UT**
C364	LW2-C364-B	5.44 UJ	5.53 UJ	15 J	230 J	131 J	5.08 UJ	4.36 UJ	10.1 UJ	9.1 UJ	**376 JT**
C364	LW2-C364-C	1.58 U	1.61 U	2.07 U	0.963 U	1.24 U	1.48 U	1.27 U	2.93 U	2.65 U	**2.93 UT**
C366-1	LW2-C366-B1	1.89 UT	1.92 UT	2.46 UT	3.78 UT	34.4 JT	1.76 UT	1.51 UT	3.78 UT	3.16 UT	**34.4 JT**
C366-1	LW2-C366-C1	1.74 UT	1.77 UT	3.48 UT	121 JT	72.3 JT	1.63 UT	1.4 UT	3.22 UT	2.91 UT	**193 JT**
C366-1	LW2-C366-D1	1.23 UT	1.26 UT	1.61 UT	50.4 JT	16.2 T	1.15 UT	0.989 UT	2.29 UT	2.06 UT	**66.6 JT**
C366-1	LW2-C366-E1	1.45 UT	1.47 UT	111 JT	54.3 JT	21.9 T	1.35 UT	1.16 UT	2.68 UT	2.42 UT	**187 JT**
C366-1	LW2-C366-G1	1.35 UT	1.38 UT	689 JT	87.5 JT	55.6 JT	1.26 UT	1.08 UT	2.51 UT	2.26 UT	**832 JT**
C366-2	LW2-C366-B2	9.59 U	9.75 U	12.5 U	5.82 U	7.48 U	8.95 U	7.69 U	17.8 U	16 U	**17.8 UT**
C366-2	LW2-C366-C2	6.95 U	7.07 U	9.06 U	4.22 U	26.2 J	6.49 U	5.57 U	12.9 U	11.6 U	**26.2 JT**
C366-2	LW2-C366-D2	7.45 U	7.57 U	9.71 U	4.52 U	41 J	6.95 U	5.97 U	13.8 U	12.5 U	**41 JT**
C366-2	LW2-C366-F2	1.31 U	1.34 U	1.71 U	0.798 U	1.02 U	1.23 U	1.05 U	2.43 U	2.2 U	**2.43 UT**
C368	LW2-C368-B	19.5 U	19.8 U	25.4 U	11.9 U	15.2 U	18.2 U	15.6 U	36.1 U	32.6 U	**36.1 UT**
C368	LW2-C368-C	5.93 U	6.03 U	7.73 U	46 J	63 J	5.54 U	32.9 J	11 U	9.92 U	**142 JT**
C368	LW2-C368-D	1.28 U	1.3 U	1.67 U	0.777 U	0.997 U	1.19 U	1.02 U	2.37 U	2.14 U	**2.37 UT**
C368	LW2-C368-E	2.52 U	2.56 U	3.28 U	1.53 U	1.97 U	2.35 U	2.02 U	4.67 U	4.22 U	**4.67 UT**
C371	LW2-C371-B	7.68 U	7.81 U	297	114	35	7.17 U	6.16 U	14.2 U	12.8 U	**446 T**
C371	LW2-C371-C	1.29 U	1.32 U	11	7.4 J	2.49 J	1.21 U	1.04 U	2.4 U	2.16 U	**20.9 JT**
C371	LW2-C371-E	1.25 U	1.28 U	1.63 U	0.762 U	0.978 U	1.17 U	1.01 U	2.32 U	2.1 U	**2.32 UT**
C372	LW2-C372-B	1.58 U	1.6 U	2.4 J	109 J	65.2 J	1.47 U	1.26 U	2.92 U	2.64 U	**177 JT**
C372	LW2-C372-C	1.39 U	1.41 U	1.81 U	21.6	15.5	1.3 U	1.11 U	2.57 U	2.33 U	**37.1 T**
C373	LW2-C373-B	1.81 U	1.84 U	2.36 U	7.96 J	1.41 U	1.69 U	1.45 U	3.35 U	3.02 U	**7.96 JT**
C373	LW2-C373-C	1.92 U	1.95 U	7.06	21.8 J	11.9 J	1.79 U	1.54 U	3.55 U	3.21 U	**40.8 JT**
C377	LW2-C377-B	1.64 U	1.67 U	13.9 J	12.7 J	7.06 J	1.53 U	1.32 U	3.04 U	2.75 U	**33.7 JT**
C377	LW2-C377-C	3.51 U	3.57 U	139	84	43.7	3.28 U	2.81 U	6.5 U	5.87 U	**267 T**
C377	LW2-C377-E	1.53 U	1.56 U	1.99 U	0.93 U	26.6	1.43 U	1.23 U	2.83 U	2.56 U	**26.6 T**
C379	LW2-C379-B	8.1 U	8.24 U	135 J	518 J	255 J	7.57 U	6.5 U	15 U	13.6 U	**908 JT**
C379	LW2-C379-C	5.1 U	5.19 U	56.2 J	253 J	116 J	4.76 U	4.09 U	9.45 U	8.53 U	**425 JT**
C379	LW2-C379-D	1.45 U	1.47 U	1.89 U	0.879 U	1.13 U	1.35 U	1.16 U	2.68 U	2.42 U	**2.68 UT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	12674-11-2	53469-21-9	12672-29-6	11097-69-1	11096-82-5	37324-23-5	11100-14-4	11104-28-2	11141-16-5	Total
	Chemical Name	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclors
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID										
C380	LW2-C380-B	1.6 U	1.63 U	2.09 U	0.973 U	1.25 U	1.5 U	1.28 U	2.96 U	2.68 U	**2.96 UT**
C380	LW2-C380-C	1.58 U	1.61 U	2.06 U	0.961 U	1.23 U	1.48 U	1.27 U	2.93 U	2.65 U	**2.93 UT**
C382	LW2-C382-B	16.2 U	16.4 U	180	783	380 J	15.1 U	13 U	29.9 U	27 U	**1340 JT**
C382	LW2-C382-C	1.47 U	1.49 U	1.92 U	0.893 U	1.15 U	1.37 U	1.18 U	2.72 U	2.46 U	**2.72 UT**
C383	LW2-C383-B	6.06 U	6.16 U	7.9 U	3.68 U	204	5.66 U	4.86 U	11.2 U	10.1 U	**204 T**
C383	LW2-C383-C	1.52 U	1.54 U	1.98 U	0.923 U	1.18 U	1.42 U	1.22 U	2.81 U	2.54 U	**2.81 UT**
C384	LW2-C384-B	36.6 U	37.2 U	517 J	2220 J	1100 J	34.1 U	29.3 U	67.7 U	61.1 U	**3840 JT**
C384	LW2-C384-C	1.23 U	1.25 U	13.1 J	38.1 J	8.91 J	1.15 U	0.984 U	2.27 U	2.05 U	**60.1 JT**
C386	LW2-C386-B	1.66 U	1.69 U	32.8 J	78.8	53.2 J	1.55 U	1.33 U	3.07 U	2.77 U	**165 JT**
C386	LW2-C386-C	1.14 U	1.16 U	1.48 U	0.692 U	0.888 U	1.06 U	0.913 U	2.11 U	1.9 U	**2.11 UT**
C388	LW2-C388-B	1.57 U	1.6 U	2.05 U	0.955 U	1.23 U	1.47 U	1.26 U	2.91 U	2.63 U	**2.91 UT**
C388	LW2-C388-C	1.62 U	1.65 U	2.11 U	0.985 U	1.26 U	1.51 U	1.3 U	3 U	2.71 U	**3 UT**
C392	LW2-C392-B	12.5 U	12.7 U	198 J	539	106	11.7 U	10 U	23.2 U	20.9 U	**843 JT**
C392	LW2-C392-C	1.31 U	1.33 U	7.06 J	31.4	17 J	1.22 U	1.05 U	2.43 U	2.19 U	**55.5 JT**
C393	LW2-C393-B	10.1 U	10.3 U	95.1	664 J	458 J	9.42 U	8.09 U	18.7 U	16.9 U	**1220 JT**
C393	LW2-C393-C	1.23 U	1.25 U	1.6 U	0.748 U	0.959 U	1.15 U	0.986 U	2.28 U	2.06 U	**2.28 UT**
C396	LW2-C396-B	1.49 U	1.51 U	1.94 U	0.902 U	1.16 U	1.39 U	1.19 U	2.75 U	2.48 U	**2.75 UT**
C396	LW2-C396-C	1.67 U	1.69 U	2.17 U	1.01 U	1.3 U	1.56 U	1.34 U	3.09 U	2.79 U	**3.09 UT**
C397	LW2-C397-B	4.24 UJ	4.31 UJ	85 J	289 J	194 J	3.96 UJ	3.4 UJ	7.84 UJ	7.08 UJ	**568 JT**
C397	LW2-C397-C	5.76 U	5.86 U	98.6	234	262 J	5.38 U	4.62 U	10.7 U	9.64 U	**595 JT**
C397	LW2-C397-D	5.64 U	5.74 U	7.35 U	210	174	5.27 U	4.52 U	10.4 U	9.44 U	**384 T**
C400	LW2-C400-B	1.81 U	1.84 U	2.48 J	12.7 J	3.4 J	1.69 U	1.45 U	3.35 U	3.02 U	**18.6 JT**
C400	LW2-C400-C	1.85 U	1.89 U	9.43	18.5 J	13.6	1.73 U	1.49 U	3.44 U	3.1 U	**41.5 JT**
C401	LW2-C401-B	1.48 U	1.51 U	15.3	14.6	16.3 J	1.38 U	1.19 U	2.74 U	2.48 U	**46.2 JT**
C401	LW2-C401-C	1.29 U	1.31 U	11.6 J	14.3 J	5.04 J	1.2 U	1.03 U	2.38 U	2.15 U	**30.9 JT**
C401	LW2-C401-D	5.05 U	5.13 U	143 J	97 J	44.1 J	4.71 U	4.05 U	9.35 U	8.44 U	**284 JT**
C401	LW2-C401-E	14.4 U	14.7 U	565	194	53.1	13.5 U	11.6 U	26.7 U	24.1 U	**812 T**
C402	LW2-C402-B	2.28 U	2.32 U	80.2 J	258 J	78.4 J	2.13 U	1.83 U	4.22 U	3.81 U	**417 JT**
C402	LW2-C402-C	1.22 U	1.24 U	1.59 U	6.24 J	0.953 U	1.14 U	0.979 U	2.26 U	2.04 U	**6.24 JT**
C403	LW2-C403-B	1.27 U	1.29 U	1.65 U	3.82 J	1.78 J	1.19 U	1.02 U	2.35 U	2.12 U	**5.6 JT**
C403	LW2-C403-C	1.31 U	1.33 U	1.71 U	0.796 U	1.02 U	1.22 U	1.05 U	2.42 U	2.19 U	**2.42 UT**
C403	LW2-C403-D	1.49 U	1.52 U	1.94 U	0.906	1.16 U	1.39 U	1.2 U	2.76 U	2.49 U	**0.906 T**
C405	LW2-C405-B	4.25 UJ	4.32 UJ	56.3 J	259 J	164 J	3.97 UJ	3.4 UJ	7.86 UJ	7.1 UJ	**479 JT**
C405	LW2-C405-C	1.24 UJ	1.26 UJ	5.55 J	37 J	27.5 J	1.16 UJ	0.997 UJ	2.3 UJ	2.08 UJ	**70.1 JT**
C409	LW2-C409-B	1.62 UJ	1.64 UJ	43.5 J	95.4 J	45.7 J	1.51 UJ	1.29 UJ	2.99 UJ	2.7 UJ	**185 JT**
C409	LW2-C409-C	2.56 U	2.6 U	47.1	123 J	29.6	2.39 U	2.05 U	4.74 U	4.28 U	**200 JT**
C413-1	LW2-C413-B1	1.76 U	1.79 U	32.5 J	53.8 J	39.1 J	1.65 U	1.41 U	3.26 U	2.95 U	**125 JT**
C413-1	LW2-C413-C1	1.68 U	1.7 U	13.4	45.1 J	31 J	1.57 U	1.34 U	3.1 U	2.8 U	**89.5 JT**
C413-2	LW2-C413-B2	3.25 U	3.3 U	120	140	39.9	3.03 U	2.6 U	6.01 U	5.43 U	**300 T**
C413-2	LW2-C413-C2	3.45 U	3.51 U	34	159 J	202 J	3.23 U	2.77 U	6.4 U	5.78 U	**395 JT**
C413-2	LW2-C413-D2	1.6 U	1.63 U	2.09 U	38.1 J	32.4 J	1.49 U	1.28 U	2.96 U	2.68 U	**70.5 JT**
C415	LW2-C415-B	1.27 U	1.29 U	1.66 U	15 J	7.19	1.19 U	1.02 U	2.35 U	2.13 U	**22.2 JT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	12674-11-2 Aroclor 1016 ug/kg	53469-21-9 Aroclor 1242 ug/kg	12672-29-6 Aroclor 1248 ug/kg	11097-69-1 Aroclor 1254 ug/kg	11096-82-5 Aroclor 1260 ug/kg	37324-23-5 Aroclor 1262 ug/kg	11100-14-4 Aroclor 1268 ug/kg	11104-28-2 Aroclor 1221 ug/kg	11141-16-5 Aroclor 1232 ug/kg	Total Aroclors ug/kg
C415	LW2-C415-C	1.26 U	1.28 U	1.64 U	0.766 U	0.984 U	1.18 U	1.01 U	2.34 U	2.11 U	**2.34 UT**
C415	LW2-C415-D	1.31 U	1.33 U	1.7 U	0.794 U	1.02 U	1.22 U	1.05 U	2.42 U	2.19 U	**2.42 UT**
C417	LW2-C417-B	2.11 U	2.14 U	40.8	97.6 J	60.3 J	1.97 U	1.69 U	3.9 U	3.53 U	**199 JT**
C417	LW2-C417-D	1.29 U	1.32 U	1.69 U	109 J	58.4 J	1.21 U	1.04 U	2.4 U	2.17 U	**167 JT**
C420	LW2-C420-B	1.78 U	1.81 U	33.7	157	81.5 J	1.67 U	1.43 U	3.3 U	2.98 U	**272 JT**
C420	LW2-C420-C	1.52 U	1.54 U	74.6	178 J	144 J	1.42 U	1.22 U	2.81 U	2.54 U	**397 JT**
C421	LW2-C421-B	13.7 U	14 U	179	703	350 J	12.8 U	11 U	25.4 U	23 U	**1230 JT**
C421	LW2-C421-C	6.33 U	6.44 U	37 J	200	75.9 J	5.91 U	5.07 U	11.7 U	10.6 U	**313 JT**
C425-1	LW2-C425-B1	1.26 UT	1.28 UT	10.2 T	32.9 JT	21.5 JT	1.17 UT	1.01 UT	2.33 UT	2.1 UT	**64.6 JT**
C425-1	LW2-C425-C1	1.29 UT	1.31 UT	16.2 T	57 JT	34.3 JT	1.21 UT	1.04 UT	2.39 UT	2.16 UT	**108 JT**
C425-1	LW2-C425-E1	2.48 UJT	2.52 UJT	30.5 JT	96.2 JT	45.2 JT	2.32 UJT	1.99 UJT	4.59 UJT	4.15 UJT	**172 JT**
C425-2	LW2-C425-B2	1.36 UJ	1.38 UJ	13.1 J	45.2 J	30.2 J	1.27 UJ	1.09 UJ	2.52 UJ	2.27 UJ	**88.5 JT**
C425-2	LW2-C425-C2	1.28 UJ	1.3 UJ	5.18 J	20.9 J	11.3 J	1.19 UJ	1.02 UJ	2.36 UJ	2.13 UJ	**37.4 JT**
C425-2	LW2-C425-D2	1.5 UJ	1.53 UJ	19.5 J	58.7 J	30.9 J	1.4 UJ	1.21 UJ	2.79 UJ	2.52 UJ	**109 JT**
C426	LW2-C426-B	1.9 U	1.94 U	26.7	100 J	69.1 J	1.78 U	1.53 U	3.52 U	3.18 U	**196 JT**
C426	LW2-C426-C	1.33 U	1.35 U	1.73 U	0.805 U	1.03 U	1.24 U	1.06 U	2.45 U	2.22 U	**2.45 UT**
C430	LW2-C430-B	1.77 U	1.8 U	24.7	76.2	40.2 J	1.65 U	1.42 U	3.28 U	2.96 U	**141 JT**
C430	LW2-C430-C	3.55 U	3.61 U	60.5	145	72.2	3.31 U	2.84 U	6.57 U	5.93 U	**278 T**
C430	LW2-C430-E	6.36 U	6.47 U	93.3 J	315 J	139	5.94 U	5.1 U	11.8 U	10.6 U	**547 JT**
C431	LW2-C431-B	17.4 UJ	675 J	22.6 UJ	518 J	240 J	16.2 UJ	13.9 UJ	32.2 UJ	29.1 UJ	**1430 JT**
C431	LW2-C431-C	1.42 U	1.45 U	1.85 U	0.863 U	1.11 U	1.33 U	1.14 U	2.63 U	2.38 U	**2.63 UT**
C431	LW2-C431-D	1.37 U	1.39 U	1.78 U	0.831 U	2.01 J	1.28 U	1.1 U	2.53 U	2.29 U	**2.01 JT**
C434	LW2-C434-B	1.75 U	1.78 U	2.53 J	46.7	39.7 J	1.63 U	1.4 U	3.23 U	2.92 U	**88.9 JT**
C434	LW2-C434-C	1.35 U	1.37 U	1.76 U	0.818 U	1.05 U	1.26 U	1.08 U	2.49 U	2.25 U	**2.49 UT**
C434	LW2-C434-D	1.31 U	1.33 U	1.71 U	0.796 U	1.02 U	1.22 U	1.05 U	2.43 U	2.19 U	**2.43 UT**
C436	LW2-C436-B	1.25 U	1.27 U	1.73 J	8.63 J	4.19	1.17 U	1.01 U	2.32 U	2.1 U	**14.6 JT**
C436	LW2-C436-C	3.33 U	3.39 U	5.4 J	45.2	31.7	3.11 U	2.67 U	6.17 U	5.57 U	**82.3 JT**
C437	LW2-C437-B	1.28 U	1.3 U	1.67 U	11.8 J	5.95	1.19 U	1.03 U	2.37 U	2.14 U	**17.8 JT**
C437	LW2-C437-C	1.31 U	1.33 U	1.71 U	0.797 U	1.02 U	1.23 U	1.05 U	2.43 U	2.2 U	**2.43 UT**
C437	LW2-C437-D	1.34 U	1.37 U	1.75 U	0.816 U	1.05 U	1.25 U	1.08 U	2.49 U	2.25 U	**2.49 UT**
C439	LW2-C439-B	1.85 U	1.89 U	12.9	34.9 J	26 J	1.73 U	1.49 U	3.43 U	3.1 U	**73.8 JT**
C439	LW2-C439-C	1.62 U	1.65 U	39.5 J	79.5	63.8 J	1.51 U	1.3 U	3 U	2.71 U	**183 JT**
C440	LW2-C440-B	1.53 U	1.56 U	2 U	0.932 U	1.2 U	1.43 U	1.23 U	2.84 U	2.56 U	**2.84 UT**
C440	LW2-C440-C	3.38 U	3.43 U	102 J	96.1	64.6 J	3.15 U	2.71 U	6.25 U	5.65 U	**263 JT**
C441-1	LW2-C441-B1	1.66 U	1.69 U	44.1	56.8 J	47.7 J	1.55 U	1.33 U	3.07 U	2.78 U	**149 JT**
C441-1	LW2-C441-C1	1.36 U	1.38 U	1.77 U	0.827 U	1.06 U	1.27 U	1.09 U	2.52 U	2.28 U	**2.52 UT**
C441-2	LW2-C441-B2	5.28 UT	5.36 UT	186 T	157 JT	98.3 JT	4.93 UT	4.23 UT	9.77 UT	8.82 UT	**441 JT**
C441-2	LW2-C441-C2	1.47 UT	1.49 UT	1.91 UT	0.892 UT	1.14 UT	1.37 UT	1.18 UT	2.72 UT	2.46 UT	**2.72 UT**
C444	LW2-C444-B	6.44 U	6.55 U	313	251	121 J	6.02 U	5.17 U	11.9 U	10.8 U	**685 JT**
C444	LW2-C444-C	3.39 U	3.45 U	99.3	92.8	61 J	3.17 U	2.72 U	6.29 U	5.68 U	**253 JT**
C445	LW2-C445-B	1.82 U	1.85 U	42.8	79.6 J	41.7	1.7 U	1.46 U	3.37 U	3.04 U	**164 JT**
C445	LW2-C445-C	3.44 U	3.5 U	105	117 J	60	3.21 U	2.76 U	6.37 U	5.76 U	**282 JT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	12674-11-2	53469-21-9	12672-29-6	11097-69-1	11096-82-5	37324-23-5	11100-14-4	11104-28-2	11141-16-5	Total
	Chemical Name	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclors
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID										
C445	LW2-C445-E	1.7 U	1.73 U	7.34	65 J	37.6	1.59 U	1.36 U	3.14 U	2.84 U	**110 JT**
C447	LW2-C447-B	11.6 U	11.8 U	368	251 J	136 J	10.9 U	9.34 U	21.6 U	19.5 U	**755 JT**
C447	LW2-C447-C	1.54 U	1.57 U	2.01 U	0.936 U	2.91 J	1.44 U	1.23 U	2.85 U	2.58 U	**2.91 JT**
C447	LW2-C447-D	1.36 U	1.38 U	1.77 U	0.825 U	1.06 U	1.27 U	1.09 U	2.51 U	2.27 U	**2.51 UT**
C448	LW2-C448-B	1.88 U	1.91 U	7.74 J	16.3 J	6.64	1.76 U	1.51 U	3.48 U	3.14 U	**30.7 JT**
C448	LW2-C448-C	3.9 U	3.96 U	109	75.8 J	56.2 J	3.64 U	3.12 U	7.22 U	6.52 U	**241 JT**
C450	LW2-C450-B	1.99 U	2.03 U	40.3 J	28	13.6	1.86 U	1.6 U	3.69 U	3.33 U	**81.9 JT**
C450	LW2-C450-C	34.4 U	34.9 U	1270	605 J	231	32.1 U	27.5 U	63.6 U	57.5 U	**2110 JT**
C453	LW2-C453-B	90.3 U	91.9 U	1630	1330	644	84.4 U	72.4 U	167 U	151 U	**3600 T**
C453	LW2-C453-C	8.48 U	8.62 U	60.6	151 J	87.2 J	7.92 U	6.8 U	15.7 U	14.2 U	**299 JT**
C453	LW2-C453-D	1.63 U	1.65 U	2.12 U	3.55	2.29 J	1.52 U	1.3 U	3.01 U	2.72 U	**5.84 JT**
C454	LW2-C454-B	1.25 U	1.27 U	1.63 U	7.73	7.93 J	1.17 U	1 U	2.51 UJ	2.1 U	**15.7 JT**
C454	LW2-C454-C	1.78 U	1.81 U	2.32 U	10.2	11.9 J	1.66 U	1.43 U	3.3 U	2.98 U	**22.1 JT**
C454	LW2-C454-D	1.64 U	1.67 U	2.14 U	2.83 J	6.16 J	1.53 U	1.31 U	3.03 U	2.74 U	**8.99 JT**
C454	LW2-C454-E	1.32 UJ	1.35 UJ	1.72 UJ	0.804 UJ	1.03 UJ	1.24 UJ	1.06 UJ	2.45 UJ	2.21 UJ	**2.45 UJT**
C455	LW2-C455-B	547 U	16400	713 U	5520 J	427 U	511 U	439 U	1010 U	916 U	**21900 JT**
C455	LW2-C455-C	6.72 U	6.84 U	234 J	4.09 U	198 J	6.28 U	5.39 U	12.5 U	11.2 U	**432 JT**
C455	LW2-C455-D	1.63 U	1.66 U	15.7 J	11.8 J	8.51 J	1.52 U	1.31 U	3.02 U	2.73 U	**36 JT**
C456	LW2-C456-B	1.79 UJ	1.82 UJ	3.58 UJ	20.3 J	9.13 J	1.67 UJ	1.43 UJ	3.31 UJ	2.99 UJ	**29.4 JT**
C456	LW2-C456-C	5.91 UJ	6.01 UJ	139 J	80.3 J	38.8 J	5.52 UJ	4.74 UJ	10.9 UJ	9.88 UJ	**258 JT**
C456	LW2-C456-D	1.66 UJ	1.69 UJ	2.16 UJ	5.07 J	5.19 J	1.55 UJ	1.33 UJ	3.07 UJ	2.78 UJ	**10.3 JT**
C456	LW2-C456-F	1.61 UJ	1.63 UJ	2.09 UJ	0.976 UJ	1.25 UJ	1.5 UJ	1.29 UJ	2.97 UJ	2.69 UJ	**2.97 UJT**
C457	LW2-C457-B	1.94 U	1.98 U	12.2 J	26.3 J	14.5 J	1.82 U	1.56 U	3.6 U	3.25 U	**53 JT**
C457	LW2-C457-C	1.57 U	1.6 U	53.5 J	55.3	30.2 J	1.47 U	1.26 U	2.91 U	2.63 U	**139 JT**
C457	LW2-C457-E	1.62 U	1.64 U	2.11 U	0.982 U	1.26 U	1.51 U	1.3 U	2.99 U	2.7 U	**2.99 UT**
C458-1	LW2-C458-B	2.05 U	2.08 U	3.5 J	17.2 J	8.42 J	1.91 U	1.64 U	3.79 U	3.43 U	**29.1 JT**
C458-1	LW2-C458-C	1.88 U	1.91 U	20.3 J	25.6 J	12.1 J	1.75 U	1.5 U	3.47 U	3.14 U	**58 JT**
C458-2	LW2-C458-B2	1.87 UT	1.9 UT	12 JT	28.4 JT	13.3 JT	1.75 UT	1.5 UT	3.46 UT	3.13 UT	**53.7 JT**
C458-2	LW2-C458-C2	1.88 UT	1.91 UT	22.6 JT	33.2 JT	22.8 JT	1.75 UT	1.5 UT	3.47 UT	3.14 UT	**78.6 JT**
C461	LW2-C461-B	2.02 U	2.05 U	26.4 J	50.9 J	26.2 J	1.89 U	1.62 U	3.74 U	3.38 U	**104 JT**
C461	LW2-C461-C	1.84 U	1.87 U	48.5 J	111 J	64.2 J	1.72 U	1.47 U	3.41 U	3.08 U	**224 JT**
C462	LW2-C462-B	2.01 U	2.05 U	3.11 J	20.9 J	9.12 J	1.88 U	1.61 U	3.73 U	3.37 U	**33.1 JT**
C462	LW2-C462-C	1.8 U	1.83 U	14.4 J	30.6 J	16.5 J	1.68 U	1.44 U	3.33 U	3.01 U	**61.5 JT**
C468	LW2-C468-B	1.82 UJ	1.85 UJ	12 J	42.6 J	24.9 J	1.7 UJ	1.46 UJ	3.36 UJ	3.04 UJ	**79.5 JT**
C468	LW2-C468-C	1.85 U	1.88 U	19.5	57.5	33.7 J	1.73 U	1.48 U	3.42 U	3.09 U	**111 JT**
C471	LW2-C471-B	1.97 U	2 U	2.57 U	10.4 J	3.71 J	1.84 U	1.58 U	3.65 U	3.29 U	**14.1 JT**
C471	LW2-C471-C	1.65 U	1.67 U	2.15 U	11.2 J	4.7 J	1.54 U	1.32 U	3.05 U	2.75 U	**15.9 JT**
C474	LW2-C474-B	1.98 U	2.01 U	3.75 J	44.3 J	17.4 J	1.84 U	1.58 U	3.66 U	3.3 U	**65.5 JT**
C474	LW2-C474-C	1.73 U	1.76 U	2.26 U	23.8 J	9.43 J	1.62 U	1.39 U	3.21 U	2.9 U	**33.2 JT**
C477	LW2-C477-B	5.44 UJ	5.53 UJ	99.9 J	466 J	118 J	5.08 UJ	4.36 UJ	10.1 UJ	9.1 UJ	**684 JT**
C477	LW2-C477-C	2.65 UJ	2.69 UJ	3.45 UJ	140 J	2.06 UJ	2.47 UJ	2.12 UJ	4.9 UJ	4.43 UJ	**140 JT**
C494	LW2-C494-B	5.75 UJ	5.85 UJ	109 J	134 J	246 J	5.37 UJ	4.61 UJ	10.7 UJ	9.63 UJ	**489 JT**

Table 4-5. Aroclor Concentrations Used in Total PCB Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	12674-11-2	53469-21-9	12672-29-6	11097-69-1	11096-82-5	37324-23-5	11100-14-4	11104-28-2	11141-16-5	Total
	Chemical Name	Aroclor 1016	Aroclor 1242	Aroclor 1248	Aroclor 1254	Aroclor 1260	Aroclor 1262	Aroclor 1268	Aroclor 1221	Aroclor 1232	Aroclors
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID										
C494	LW2-C494-C	10.8 UJ	10.9 UJ	162 J	287 J	522 J	10 UJ	8.62 UJ	19.9 UJ	18 UJ	**971 JT**
C494	LW2-C494-D	4.82 UJ	4.91 UJ	125 J	133 J	369 J	4.51 UJ	3.87 UJ	8.93 UJ	8.07 UJ	**627 JT**
C494	LW2-C494-E	1.53 UJ	1.56 UJ	2 UJ	0.932 UJ	1.2 UJ	1.43 UJ	1.23 UJ	2.84 UJ	2.57 UJ	**2.84 UJT**

Notes:

J The associated numerical value is an estimated quantity.

T The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

U The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	72-54-8 4,4'-DDD ug/kg		72-55-9 4,4'-DDE ug/kg		50-29-3 4,4'-DDT ug/kg		Total 4,4'-DDD, -DDE, -DDT ug/kg	
Location	**Sample ID**								
Beach Sediment Samples									
B001	LW2-B001	2.4		0.287		4.65		7.34	T
B002	LW2-B002	0.0468	U	0.0438	U	0.452		0.452	T
B003	LW2-B003	1.89		0.209		0.47	NJ	2.57	JT
B004	LW2-B004	1.24	NJ	0.0449	U	2.79		4.03	JT
B005	LW2-B005	0.629		0.14		0.461	J	1.23	JT
B006	LW2-B006	0.0447	U	0.042	U	0.311	NJ	0.311	JT
B007	LW2-B007	0.749	NJ	0.398	NJ	0.447	J	1.59	JT
B008	LW2-B008	0.576	J	0.0387	U	0.0478	U	0.576	JT
B009	LW2-B009	0.056	U	0.0407	U	0.406	J	0.406	JT
B010	LW2-B010	0.459		0.249	J	0.778	J	1.49	JT
B011	LW2-B011	0.041	U	0.0384	U	1.21	NJ	1.21	JT
B012	LW2-B012	1.27	NJ	0.269	NJ	0.781	J	2.32	JT
B015	LW2-B015	0.204		0.588		0.438	J	1.23	JT
B016	LW2-B016	3.75	J	0.639	NJ	1.21	NJ	5.6	JT
B017	LW2-B017	0.082	NJ	0.088	NJ	0.219	J	0.389	JT
B018	LW2-B018	28.3	NJ	122	NJ	184	J	334	JT
B019	LW2-B019	0.428	NJ	0.0406	U	2.64	J	3.07	JT
B020	LW2-B020	0.934		0.511	J	0.559	J	2	JT
B021	LW2-B021	0.412	NJ	0.261	NJ	0.414	J	1.09	JT
B022-1	LW2-B022-1	1.82		1.37	NJ	0.941	NJ	4.13	JT
B022-2	LW2-B022-2	1.96	J	1.15	J	1.64	NJ	4.75	JT
B023	LW2-B023	0.219	J	0.407		0.508	J	1.13	JT
B024	LW2-B024	4.71	NJ	5.03		0.789	NJ	10.5	JT
B025-1	LW2-B025-1	0.184	NJT	0.186	NJT	0.325	JT	0.695	JT
B025-2	LW2-B025-2	0.947	NJ	0.796	NJ	0.423	J	2.17	JT
B026	LW2-B026	2.75		2.18	J	13	NJ	17.9	JT
B050	LW2-B050	81.5	NJ	33.2	NJ	78.3	J	193	JT
Surface Interval Sediment Samples									
C093	LW2-C093-A	76.5		67.2		27.2		171	T
D1-1	LW2-D1-1	1.75	JT	2.41	JT	0.21	JT	4.37	JT
D1-2	LW2-D1-2	1.68	J	2		3.4	J	7.08	JT
D2	LW2-D2	1.28	NJ	0.83	NJ	0.169	J	2.28	JT
G001	LW2-G001	1.45		1.87		0.682	NJ	4	JT
G002	LW2-G002	1.15		2.21		0.587	J	3.95	JT
G003	LW2-G003	1.79	J	1.57	J	2	NJ	5.36	JT
G004	LW2-G004	0.467	J	2.17	J	0.0865	UJ	2.64	JT
G005	LW2-G005	1.47	J	1.63	J	0.113	UJ	3.1	JT
G006	LW2-G006	1.95	J	1.96	J	2.21	NJ	6.12	JT
G007-1	LW2-G007-1	1.74	NJT	2.66	NJT	0.23	NJT	4.63	JT
G007-2	LW2-G007-2	1.45	NJ	2.52	NJ	0.996	J	4.97	JT
G008	LW2-G008	1.11	J	1.79	J	4.57	J	7.47	JT
G009	LW2-G009	2.06	J	3.11		0.999	J	6.17	JT
G010	LW2-G010	5.44		0.722	NJ	1.92	J	8.08	JT
G011	LW2-G011	3.96		4.24	J	1.46	J	9.66	JT
G012	LW2-G012	1.74	NJ	1.97	NJ	0.376	J	4.09	JT
G013	LW2-G013	1.99	NJ	2.11	NJ	1.68	J	5.78	JT
G014	LW2-G014	0.856	NJ	2.33	NJ			3.19	JT
G015	LW2-G015	2.88	J	2.98	J	3.17	NJ	9.03	JT
G016	LW2-G016	1.62		2.97		0.707	J	5.3	JT
G017	LW2-G017	3.18	J	2.97	J	1.48	J	7.63	JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	72-54-8	72-55-9	50-29-3	Total 4,4'-DDD,
	Chemical Name	4,4'-DDD	4,4'-DDE	4,4'-DDT	-DDE, -DDT
	Unit	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID				
G018	LW2-G018	2.3 J	2.76	2.46	7.52 JT
G019	LW2-G019	1.65 J	0.835 NJ	1.72	4.21 JT
G020	LW2-G020	1.71	2.61	1.08 J	5.4 JT
G021	LW2-G021	2.06	3.06	0.857	5.98 T
G022	LW2-G022	2.03 J	2.21	2.06	6.3 JT
G023-1	LW2-G023-1	0.194 NJT	0.275 NJT	0.161 J	0.63 JT
G023-2	LW2-G023-2	0.0609 UJ	0.365 NJ		0.365 JT
G024	LW2-G024	1.75	2.37	5.64	9.76 T
G025	LW2-G025	0.311	2.07 NJ	2.53 J	4.91 JT
G026	LW2-G026	1.07 NJ	2.47 NJ	0.15 NJ	3.69 JT
G027	LW2-G027	0.805	1.02	0.653 J	2.48 JT
G028	LW2-G028	3.38 NJ	5.28 NJ	0.604 J	9.26 JT
G029	LW2-G029	17 J	5.25	2.55	24.8 JT
G030	LW2-G030	2.26 J	3.42 J	0.623	6.3 JT
G031	LW2-G031	1.87 NJ	2.94 NJ	0.137 J	4.95 JT
G032	LW2-G032	1.27 J	2.31 J	0.294 J	3.87 JT
G033	LW2-G033	1.79	1.24	0.323	3.35 T
G034	LW2-G034	2.53	2.9	25.8	31.2 T
G035	LW2-G035	2.1	3.4	0.564 NJ	6.06 JT
G036	LW2-G036	2.27 J	2.79	0.816	5.88 JT
G037	LW2-G037	0.21 J	0.172	0.218 J	0.6 JT
G038	LW2-G038	0.977 J	1.03 J	0.334 UJ	2.01 JT
G039	LW2-G039	1.95 J	2.77	0.358 J	5.08 JT
G040	LW2-G040	0.545 J	0.274 J	0.152 J	0.971 JT
G041	LW2-G041	4.61 J	3.67	0.823	9.1 JT
G042	LW2-G042	2.86 J	2.7	1.92	7.48 JT
G043	LW2-G043	2.5 NJ	1.87 NJ	0.383 J	4.75 JT
G044-1	LW2-G044-1	2.09 JT	2.63 T	0.874 JT	5.59 JT
G044-2	LW2-G044-2	1.82 J	2.24	0.104 UJ	4.06 JT
G045	LW2-G045	1.47 J	0.714 NJ	0.585 J	2.77 JT
G046	LW2-G046	0.97 NJ	2.62 NJ		3.59 JT
G047	LW2-G047	1.26	0.439 J	0.417	2.12 JT
G048	LW2-G048	0.915	0.298 J	0.534 NJ	1.75 JT
G049	LW2-G049	0.412	0.156	0.441 J	1.01 JT
G050	LW2-G050	3 NJ	2.41 NJ	0.428 J	5.84 JT
G051	LW2-G051	2.14	2.69	0.0942 U	4.83 T
G052	LW2-G052	0.937 J	0.552 NJ	0.499	1.99 JT
G053	LW2-G053	0.051 NJ	0.0455 U		0.051 JT
G054	LW2-G054	0.954 NJ	0.232 NJ	0.211 J	1.4 JT
G055	LW2-G055	1.51 J	1.72	0.403 J	3.63 JT
G056	LW2-G056	1.78 NJ	1.18 NJ	0.741 J	3.7 JT
G057	LW2-G057	2.3 NJ	1.69 NJ	0.156 J	4.15 JT
G058	LW2-G058	1.08	1.58	0.358 NJ	3.02 JT
G059	LW2-G059	0.385 J	0.19 J	0.511 J	1.09 JT
G060	LW2-G060	3.2 NJ	0.0476 U	1.02 J	4.22 JT
G062	LW2-G062	1.03 NJ	0.671 NJ	1.07 NJ	2.77 JT
G063	LW2-G063	2.15 J	1.77	1.3 J	5.22 JT
G064	LW2-G064	7.78 NJ	1.5 NJ	4.15 J	13.4 JT
G065	LW2-G065	1.72 J	2.52	1.82 J	6.06 JT
G066	LW2-G066	4.59 J	6.85 J	33.1	44.5 JT
G067	LW2-G067	1.95 NJ	2 NJ	0.96 J	4.91 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	72-54-8	72-55-9	50-29-3	Total 4,4'-DDD,
	Chemical Name	4,4'-DDD	4,4'-DDE	4,4'-DDT	-DDE, -DDT
	Unit	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID				
G068	LW2-G068	1.96 J	1.41 J	0.441 J	3.81 JT
G069	LW2-G069	1.97 J	1.63 J	0.0785 U	3.6 JT
G070	LW2-G070	3.35	3.09	0.851 J	7.29 JT
G071	LW2-G071	1.69	1.71	0.634 J	4.03 JT
G072	LW2-G072	5.08	3.44	0.681	9.2 T
G073	LW2-G073	0.3 NJ	0.175 NJ	0.185 J	0.66 JT
G074	LW2-G074	0.264 NJ	0.204 NJ	0.289 NJ	0.757 JT
G075-1	LW2-G075-1	0.895	1.01	0.385 J	2.29 JT
G075-2	LW2-G075-2	0.977	1.34	0.162 J	2.48 JT
G076	LW2-G076	2.23	3.13 J	0.839 NJ	6.2 JT
G077	LW2-G077	2.58 NJ	3.44 NJ	1.27 J	7.29 JT
G078	LW2-G078	0.255	0.16 J	0.199	0.614 JT
G079	LW2-G079	0.053 U	0.0497 U	0.0613 U	0.0613 UT
G080	LW2-G080	0.727	0.36	0.311	1.4 T
G081	LW2-G081	2.25	2.19	0.638 NJ	5.08 JT
G082	LW2-G082	0.928	0.769	0.248	1.95 T
G083	LW2-G083	1.75 J	1.43 J	1.02 NJ	4.2 JT
G085	LW2-G085	7.41 J	4.26 NJ	7.84 J	19.5 JT
G086	LW2-G086	1.92	2.08	4.18 J	8.18 JT
G088	LW2-G088	2.49	2.37	1.34	6.2 T
G089	LW2-G089	1.81	1.02 NJ	1.4	4.23 JT
G090	LW2-G090	1.81	3.03 J	1.08 J	5.92 JT
G091	LW2-G091	4.85	3.25	2.27	10.4 T
G092	LW2-G092	1.55 J	1.84 NJ	8.64	12 JT
G093	LW2-G093	23.3 J	18.2 J	7.14 J	48.6 JT
G094	LW2-G094	11.8 J	6.9 NJ	9.15 J	27.9 JT
G095	LW2-G095	1.77	1.32	0.11 NJ	3.2 JT
G096	LW2-G096	11.3 J	3.85 J	6.71 J	21.9 JT
G097	LW2-G097	2.91	3.1	0.751 J	6.76 JT
G098	LW2-G098	1.71 J	1.94 J	0.664 J	4.31 JT
G099	LW2-G099	4.72	3.39	19.9 J	28 JT
G100	LW2-G100	17.5 NJ	5.46 NJ	29.2 J	52.2 JT
G101	LW2-G101	4.3	3.31	0.482 J	8.09 JT
G102	LW2-G102	2.34 J	0.608 J	0.981 J	3.93 JT
G103	LW2-G103	3.93	5.31	5.25 J	14.5 JT
G104	LW2-G104	1.9 J	2.3 J	0.882	5.08 JT
G105	LW2-G105	7.02 NJ	3.66 NJ	0.973 J	11.7 JT
G106	LW2-G106	3.46	3.17 J	2.13 J	8.76 JT
G107	LW2-G107	29.6 NJ	3.56	18.1 J	51.3 JT
G108	LW2-G108	3.86 J	2.3 J	0.0884 UJ	6.16 JT
G109	LW2-G109	2.03 J	1.76 J	0.949 J	4.74 JT
G110	LW2-G110	3.11	2.6	1.54	7.25 T
G111	LW2-G111	2.07 J	2.17 J	3.64 J	7.88 JT
G112	LW2-G112	2.13	2.44 J	1.52 J	6.09 JT
G113	LW2-G113	4.43 J	3.39 J	65.4 J	73.2 JT
G116	LW2-G116	4.34 J	2.72	0.0952 UJ	7.06 JT
G117	LW2-G117	3.09 NJ	1.94 NJ	1.23 J	6.26 JT
G119	LW2-G119	0.307	0.142 J	0.395 NJ	0.844 JT
G120	LW2-G120	4.22 J	2.33	4.66 J	11.2 JT
G121	LW2-G121	20.8 NJ	3.61 NJ	0.604 J	25 JT
G122	LW2-G122	4.3 NJ	2.91 NJ	0.164 J	7.37 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	CAS No Chemical Name Unit	72-54-8 4,4'-DDD ug/kg	72-55-9 4,4'-DDE ug/kg	50-29-3 4,4'-DDT ug/kg	Total 4,4'-DDD, -DDE, -DDT ug/kg
G123	LW2-G123		0.0662 U	0.062 U	0.0765 UJ	0.0765 UJT
G124	LW2-G124		2.41	0.486 J	0.379 NJ	3.28 JT
G125	LW2-G125		1.19 NJ	2.01 NJ	0.195 J	3.4 JT
G126	LW2-G126		0.102 J	0.0475 U	0.0586 UJ	0.102 JT
G127	LW2-G127		5.47 J	2.47 J	12.2 J	20.1 JT
G128	LW2-G128		1.22 J	1	0.297 J	2.52 JT
G129	LW2-G129		2.72 J	2.03 J	1.12 J	5.87 JT
G130	LW2-G130		13.9 J	1.81 J	48.3 J	64 JT
G131	LW2-G131		3.32 J	2.9 J	0.927 J	7.15 JT
G132	LW2-G132		6.5 J	3.52 J	6.74 J	16.8 JT
G133	LW2-G133		1.47 NJ	2.98 NJ	0.136 J	4.59 JT
G134	LW2-G134		3.52 J	3.65 J	3.88 J	11.1 JT
G136	LW2-G136		3.3 NJ	2.51 NJ	0.239 J	6.05 JT
G137	LW2-G137		2.98 J	2.55 J	0.193 NJ	5.72 JT
G139	LW2-G139		2.83 NJ	3.94 NJ	0.167 J	6.94 JT
G140-1	LW2-G140-1		45.2 JT	3.13 JT	2.02 JT	50.4 JT
G140-1	LW2-G140-2		1.77 NJ	0.861 NJ	0.094 J	2.73 JT
G141	LW2-G141		1.64 J	1.44 J	0.558 J	3.64 JT
G142	LW2-G142		3.7 NJ	2.25 NJ	0.699 J	6.65 JT
G143	LW2-G143		3.4	3.83 J	1.08 NJ	8.31 JT
G146	LW2-G146		1.82 J	0.363 J	0.616 J	2.8 JT
G147	LW2-G147		7.29 NJ	1.87 NJ	1.57 J	10.7 JT
G149	LW2-G149		3.03 J	3.31 J	6.51 J	12.9 JT
G150	LW2-G150		4.86 J	3.57	0.629 J	9.06 JT
G153	LW2-G153		3.84 J	2.34	0.415 J	6.6 JT
G154	LW2-G154		1.31	1.95	0.44 J	3.7 JT
G155	LW2-G155		0.347 UJ	0.325 U	0.401 UJ	0.401 UJT
G157	LW2-G157		0.265 U	0.248 U	0.306 UJ	0.306 UJT
G159	LW2-G159		1.21 J	1.29 J	0.471 J	2.97 JT
G160	LW2-G160		1.32 J	0.49 U	0.604 UJ	1.32 JT
G161	LW2-G161		0.497 U	0.466 U	0.574 UJ	0.574 UJT
G163	LW2-G163		0.122 J	0.045 U	0.0555 UJ	0.122 JT
G164	LW2-G164		0.52 NJ	0.655 NJ		1.18 JT
G165	LW2-G165		2.14	2.47	0.351 J	4.96 JT
G166	LW2-G166		0.529 NJ	0.505	0.0634 UJ	1.03 JT
G168	LW2-G168		2.05 J	2.64 J	0.348 UJ	4.69 JT
G170	LW2-G170		0.866 J	1.7	0.882 J	3.45 JT
G172	LW2-G172		2.92 J	3.28	0.521 J	6.72 JT
G175	LW2-G175		1.76	2.6	0.217 J	4.58 JT
G176	LW2-G176		0.472	0.625 J	0.077 J	1.17 JT
G178	LW2-G178		3.05 NJ	0.712 NJ	1.45 J	5.21 JT
G179	LW2-G179		76.5 J	6.36 J	11.6 J	94.5 JT
G180	LW2-G180		3.91 NJ	0.407 NJ	0.848 J	5.17 JT
G181	LW2-G181		1.41 J	2.28	0.387 J	4.08 JT
G182	LW2-G182		2.55 J	0.749 J	0.294 J	3.59 JT
G183	LW2-G183		0.258 J	0.19 J	0.13	0.578 JT
G184	LW2-G184		4.48	0.841	0.637	5.96 T
G186	LW2-G186		0.907	0.213 J	0.219 J	1.34 JT
G187	LW2-G187		0.0563 U	0.0528 U	0.0651 U	0.0651 UT
G188	LW2-G188		2.11 J	2.21	0.366 J	4.69 JT
G189	LW2-G189		6.36 J	3.84 J	115 J	125 JT

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Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	72-54-8	72-55-9	50-29-3	Total 4,4'-DDD,
	Chemical Name	4,4'-DDD	4,4'-DDE	4,4'-DDT	-DDE, -DDT
	Unit	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID				
G190	LW2-G190	2.67	1.86	0.395 U	4.53 T
G191	LW2-G191	3.67	1.32	1.68 J	6.67 JT
G192	LW2-G192	2.8 J	2.31	0.196 NJ	5.31 JT
G193	LW2-G193	5.53 J	1.22 J	0.32 UJ	6.75 JT
G194	LW2-G194	2	1.05 J	1.22	4.27 JT
G195	LW2-G195	6.02	2.43	2.87 J	11.3 JT
G197-1	LW2-G197-1	2.09	3.51 J	1.8 J	7.4 JT
G197-2	LW2-G197-2	5.54 J	2.79 J	5.95 J	14.3 JT
G198	LW2-G198	3.05 J	2.22 NJ	0.697 NJ	5.97 JT
G199	LW2-G199	2.98 J	1.05 NJ	1.19 NJ	5.22 JT
G200	LW2-G200	6.62 J	2.52	4.53 J	13.7 JT
G202	LW2-G202	5.03 J	2.27 J	0.438 NJ	7.74 JT
G203-1	LW2-G203-1	1.72 NJT	2.01 NJT	0.518 NJT	4.25 JT
G203-2	LW2-G203-2	2.62 NJ	1.92 NJ	0.85 NJ	5.39 JT
G204	LW2-G204	2.04 J	0.797 J	0.129 NJ	2.97 JT
G205	LW2-G205	2.52 NJ	1.66 NJ	1.16 NJ	5.34 JT
G206	LW2-G206	133 J	2.91 J	91.9 J	228 JT
G207	LW2-G207	18.5 J	5.6 J	7.95 J	32.1 JT
G208	LW2-G208	7.05 J	0.957 J	0.628 J	8.64 JT
G209	LW2-G209	5.26 J	1.53 NJ	1.35 NJ	8.14 JT
G210	LW2-G210	3.57 J	0.685 U	0.844 UJ	3.57 JT
G212-1	LW2-G212-1	0.39 NJ	0.0567 U		0.39 JT
G212-2	LW2-G212-2	1.44 NJ	0.709 NJ	0.403 J	2.55 JT
G213	LW2-G213	1.48 J	0.455 J	1.84 J	3.78 JT
G214-1	LW2-G214-1	3.24 J	2.21 J	0.551 J	6 JT
G215	LW2-G215	11.4	2.84 J	39.5 J	53.7 JT
G216	LW2-G216	1.52	1.46	0.749 J	3.73 JT
G217	LW2-G217	1.31	0.394 J	0.166 J	1.87 JT
G218	LW2-G218	1.34	0.746	1.98	4.07 T
G220	LW2-G220	7.83 NJ	1.88 NJ	2.14 NJ	11.9 JT
G221	LW2-G221	5.29 NJ	0.782 NJ	2.66 J	8.73 JT
G222	LW2-G222	7.5	1.9	2.47 J	11.9 JT
G224	LW2-G224	3.98 J	0.634 J	1.52 J	6.13 JT
G225	LW2-G225	75.5 J	2.35 J	24.8 J	103 JT
G226	LW2-G226	2.47	3.85	1.57 J	7.89 JT
G227	LW2-G227	0.656 J	0.458	0.39	1.5 JT
G228	LW2-G228	6.13 J	4.62	2.83 J	13.6 JT
G229	LW2-G229	7.3 J	1.94 J	7.1 J	16.3 JT
G230	LW2-G230	13.4	5.54	26.6 J	45.5 JT
G231	LW2-G231	3.78 J	1.94 J	1.09 J	6.81 JT
G232	LW2-G232	8.65 J	3.12 J	4.35 NJ	16.1 JT
G233	LW2-G233	11.5	2.69 J	0.487 NJ	14.7 JT
G234	LW2-G234	7.11 NJ	0.519 J	3.21 NJ	10.8 JT
G235	LW2-G235	0.422 NJ	0.773 NJ	0.109 J	1.3 JT
G236	LW2-G236	6.57	2.33	1.31 J	10.2 JT
G237	LW2-G237	17 J	2.69 J	6.96 J	26.7 JT
G238	LW2-G238	2.13 J	6.83	0.642 J	9.6 JT
G239	LW2-G239	3.47	2.88	7.32 J	13.7 JT
G240	LW2-G240	21.5	3.45 J	38.8 J	63.8 JT
G241	LW2-G241	6.82 J	3.3	7.08 J	17.2 JT
G242	LW2-G242	52.9	8.32	212 J	273 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No / Chemical Name / Unit	72-54-8 4,4'-DDD ug/kg	72-55-9 4,4'-DDE ug/kg	50-29-3 4,4'-DDT ug/kg	Total 4,4'-DDD, -DDE, -DDT ug/kg
Location	**Sample ID**				
G243	LW2-G243	1.42	1.63	1.12 J	4.17 JT
G244	LW2-G244	3.91 J	1.43 NJ	1.6 NJ	6.94 JT
G245	LW2-G245	16.2 J	3.77 J	10.6	30.6 JT
G246	LW2-G246	7.9 NJ	2.7 NJ	0.565 J	11.2 JT
G247	LW2-G247	6.74 J	2.88 J	1.29 J	10.9 JT
G248	LW2-G248	0.481	0.414	0.222	1.12 T
G249	LW2-G249	1.83	2.06	0.602 NJ	4.49 JT
G250-1	LW2-G250	4.09 NJ	2.31 NJ	0.732 NJ	7.13 JT
G251-1	LW2-G251-1	31.6 J	4.06 J	230	266 JT
G251-1	LW2-G251-2	20.5 J	5.33	17.2	43 JT
G252	LW2-G252	2.24 NJ	0.779 NJ	0.275 J	3.29 JT
G253	LW2-G253	4.69	0.586 J	0.276 U	5.28 JT
G254	LW2-G254	9.39 NJ	0.809 NJ	1.76 J	12 JT
G255	LW2-G255	1.38 NJ	3.92 J	12.6 NJ	17.9 JT
G257	LW2-G257	0.837	0.513	2.35 NJ	3.7 JT
G258	LW2-G258	2.07	0.0443 U	2.23 J	4.3 JT
G259	LW2-G259	73.4 J	4.8 NJ	1.87 J	80.1 JT
G260	LW2-G260	0.797 NJ	0.906 J	2.98 NJ	4.68 JT
G261	LW2-G261	0.0467 U	0.0438 U	0.054 U	0.054 UT
G263	LW2-G263	8.57 J	2.63 J	17.5 NJ	28.7 JT
G264	LW2-G264	51 J	11.6 NJ	19.9 NJ	82.5 JT
G266	LW2-G266	0.701	0.685	1.85 NJ	3.24 JT
G267	LW2-G267	2.13 J	2.89 J	0.886 NJ	5.91 JT
G268	LW2-G268	5.36	2.69	2.72 J	10.8 JT
G269	LW2-G269	66.2 J	12.9 J	42.8 J	122 JT
G270-1	LW2-G270-1	11.9 J	2.4 NJ	7.26 J	21.6 JT
G270-2	LW2-G270-2	77.5 J	17 NJ	34.6 NJ	129 JT
G271	LW2-G271	0.338 J	0.161 J	0.0525 U	0.499 JT
G272	LW2-G272	1.54	0.829	0.36 J	2.73 JT
G273	LW2-G273	21	6.6 J	21 J	48.6 JT
G274	LW2-G274	22.1 NJ	9.76 NJ	17.9 J	49.8 JT
G276	LW2-G276	29.5 J	6.51 J	35.9 J	71.9 JT
G277	LW2-G277	1.4	1.9	0.366 J	3.67 JT
G278	LW2-G278	83.3 J	13.4 J	25.2 NJ	122 JT
G280	LW2-G280	2.03	2.31	0.829 NJ	5.17 JT
G282	LW2-G282	11.4 NJ	3.98 NJ	6.11 J	21.5 JT
G283	LW2-G283	330 J	31.9 J	60.3 NJ	422 JT
G284	LW2-G284	35.7 J	8.25 J	14.8 NJ	58.8 JT
G285	LW2-G285	1.28 J	0.304	5.09	6.67 JT
G288	LW2-G288	430 J	47.7 NJ	22.4 J	500 JT
G292	LW2-G292	54.3	11.8	29.5 J	95.6 JT
G293	LW2-G293	2.2	2.03	1.39 J	5.62 JT
G294-1	LW2-G294-1	618 J	37.9 J	4.01 NJ	660 JT
G294-2	LW2-G294-2	151 JT	20.6 JT	18.1 NJT	190 JT
G295	LW2-G295	1.52	2.15	0.298 J	3.97 JT
G296	LW2-G296	2.91 NJ	4.52 NJ	2.93 J	10.4 JT
G298	LW2-G298	1600 J	32.9 J	60.4 J	1690 JT
G301	LW2-G301	38.7	14.1 J	37.6 J	90.4 JT
G302	LW2-G302	134 J	27.9	23.9 J	186 JT
G303	LW2-G303	3.35 NJ	1.23 NJ	0.545 NJ	5.13 JT
G305	LW2-G305	18.5	6.83	4.89	30.2 T

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	72-54-8	72-55-9	50-29-3	Total 4,4'-DDD,
	Chemical Name	4,4'-DDD	4,4'-DDE	4,4'-DDT	-DDE, -DDT
	Unit	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID				
G306	LW2-G306	0.749	0.773	0.267 J	1.79 JT
G307	LW2-G307	2.53	5.17	0.632 J	8.33 JT
G308	LW2-G308	14.1 J	5.55 J	1.47 J	21.1 JT
G309	LW2-G309	29.9 J	6.67 J	152 J	189 JT
G310	LW2-G310	2.96	4.74	0.422 J	8.12 JT
G311-1	LW2-G311-1	1040 JT	64.8 JT	262 JT	1370 JT
G311-2	LW2-G311-2	52.7 J	2.67 NJ	18 J	73.4 JT
G313	LW2-G313	3.15	4.73	0.565 J	8.45 JT
G314	LW2-G314	11.5	7.56	4.49 J	23.6 JT
G315	LW2-G315	74 J	14.4 J	38.1 J	127 JT
G316	LW2-G316	2.37 J	1.29 J	0.998 J	4.66 JT
G317	LW2-G317	1.23	0.965	0.322 J	2.52 JT
G318	LW2-G318	23.5 J	6.99	14.7 J	45.2 JT
G319	LW2-G319	0.182	0.293 J	0.15 J	0.625 JT
G320	LW2-G320	35.2 J	4.87	17.5 J	57.6 JT
G321	LW2-G321	3.79 J	1.16 J	2.96 J	7.91 JT
G322	LW2-G322	20.8	7.83 J	5.62 J	34.3 JT
G323	LW2-G323	7.22 J	4.58 J	39 J	50.8 JT
G324-1	LW2-G324-1	7.7 NJ	7.32 NJ	18.1 J	33.1 JT
G324-2	LW2-G324-2	14.4 NJ	12.7 NJ	9.34 J	36.4 JT
G325	LW2-G325	4.68	2.25	1.13 NJ	8.06 JT
G326	LW2-G326	4.11	2.28	0.213 NJ	6.6 JT
G327	LW2-G327	11.9 J	5.68	1.63 J	19.2 JT
G328	LW2-G328	0.278	0.304	0.208 J	0.79 JT
G329	LW2-G329	5.31 J	1.82 J	3.22 J	10.4 JT
G330	LW2-G330	33.6 J	11.6 NJ	12.6 J	57.8 JT
G331	LW2-G331	38.6 J	37.9	19.9 J	96.4 JT
G332	LW2-G332	27.7 J	12.8 J	11 J	51.5 JT
G333	LW2-G333	339 J	33.2	41.5 J	414 JT
G334	LW2-G334	148 NJ	201 NJ	143 J	492 JT
G335	LW2-G335	250 J	54.2	97.2 J	401 JT
G336	LW2-G336	60.1 J	19.9	241 J	321 JT
G337	LW2-G337	2.04 J	1.75 J	1.41 J	5.2 JT
G338	LW2-G338	12.8 J	4.25 J	25.1	42.2 JT
G339	LW2-G339	91.1 NJ	20.1 NJ	62.3 J	174 JT
G340	LW2-G340	1.05 J	1.59 J	0.0716 U	2.64 JT
G341	LW2-G341	5.6 J	2.61 J	2.33	10.5 JT
G342	LW2-G342	0.709	1.46	0.0863 UJ	2.17 T
G343	LW2-G343	0.788	1.51 J	0.794 J	3.09 JT
G344	LW2-G344	7.11 J	3.38 J	8.49	19 JT
G345-1	LW2-G345-1	153 NJT	23 NJT	525 JT	701 JT
G345-2	LW2-G345-2	120 NJ	17.9 NJ	360 J	498 JT
G346	LW2-G346	1.21	2.17	1.13 NJ	4.51 JT
G347	LW2-G347	1.62	1.97	0.515 NJ	4.11 JT
G348	LW2-G348	227 J	130	530 J	887 JT
G349	LW2-G349	7.47 J	8.04 J	2.01 J	17.5 JT
G350	LW2-G350	277	46.7	750 J	1070 JT
G351	LW2-G351	183 NJ	24.1 NJ	139 J	346 JT
G351-2	LW2-G351-2	425 NJT	46.4 NJT	587 JT	1060 JT
G352	LW2-G352	0.928	1.6	0.0823 UJ	2.53 T
G353-1	LW2-G353-1	699 J	156 J	3170 J	4030 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No / Chemical Name / Unit	72-54-8 4,4'-DDD ug/kg	72-55-9 4,4'-DDE ug/kg	50-29-3 4,4'-DDT ug/kg	Total 4,4'-DDD, -DDE, -DDT ug/kg
Location	**Sample ID**				
G353-2	LW2-G353-2	884 J	231 J	4490 J	5610 JT
G354	LW2-G354	0.929 J	2.2	0.0987 U	3.13 JT
G355	LW2-G355	2060 NJ	703 NJ	6470 J	9230 JT
G356	LW2-G356	48.4 J	21.7 J	160 J	230 JT
G357	LW2-G357	0.685 J	1.14 J	0.613 J	2.44 JT
G358	LW2-G358	6	3.17	8.14 J	17.3 JT
G359	LW2-G359	17.9 J	5.69 J	2.77 J	26.4 JT
G360	LW2-G360	2780 NJ	550 NJ	12000 NJ	15300 JT
G361	LW2-G361	2.9	3.62	15.1	21.6 T
G362-1	LW2-G362-1	14.2 JT	8.89 JT	49.9 JT	73 JT
G362-2	LW2-G362-2	15.8 NJ	8.83 NJ	58.4 NJ	83 JT
G363	LW2-G363	1.18	1.8	0.132 UJ	2.98 T
G364	LW2-G364	3.9	5.09	0.655 J	9.65 JT
G365	LW2-G365	2.41 J	3.78 J	0.074 U	6.19 JT
G366	LW2-G366	654 NJ	1140 NJ	2080 NJ	3870 JT
G367	LW2-G367	4.77 NJ	2.18 NJ	3.22 NJ	10.2 JT
G368	LW2-G368	12.2	4.56	15.7 NJ	32.5 JT
G369	LW2-G369	4.32 J	3.13 J	1.2 NJ	8.65 JT
G370	LW2-G370	6.45 J	4.28 J	0.487 UJ	10.7 JT
G371	LW2-G371	76.1 NJ	37.8 NJ	92.5 NJ	206 JT
G372-1	LW2-G372-1	1.44 JT	2.14 JT	0.789 JT	4.37 JT
G372-2	LW2-G372-2	0.796	1.6	0.641 J	3.04 JT
G374	LW2-G374	2.3 J	2.45 J	1.3 J	6.05 JT
G376	LW2-G376	3.69 NJ	3.08 NJ	3.09 NJ	9.86 JT
G377	LW2-G377	4.61 NJ	1.22 NJ	0.819 J	6.65 JT
G378	LW2-G378	1.05 J	1.93 J	0.0901 UJ	2.98 JT
G379	LW2-G379	2.66 NJ	1.83 J	2.86 NJ	7.35 JT
G380	LW2-G380	0.79 J	0.756 NJ	1.71 NJ	3.26 JT
G381	LW2-G381	3.41 J	4.74 J	1.18 J	9.33 JT
G382	LW2-G382	3.96 J	1.47 NJ	1.91 J	7.34 JT
G383	LW2-G383	0.721 J	0.442 U	3.06 NJ	3.78 JT
G384-1	LW2-G384-1	1.45 T	2.71 T	0.122 UT	4.16 T
G384-2	LW2-G384-2	1.39	2.34	0.135 U	3.73 T
G385	LW2-G385	2.42 NJ	0.879 NJ		3.3 JT
G386	LW2-G386	0.647 NJ	1.26 NJ		1.91 JT
G387	LW2-G387	0.806	1.68	1.38 J	3.87 JT
G389	LW2-G389	0.233 NJ	0.228 NJ	0.501 J	0.962 JT
G390	LW2-G390	9.01 J	8.3 NJ	20.4 J	37.7 JT
G391	LW2-G391	1.59 J	2.11 J	0.102 U	3.7 JT
G392	LW2-G392	3.04	2.08	0.197 NJ	5.32 JT
G393	LW2-G393	8.49 U	7.96 U	15.3 J	15.3 JT
G394	LW2-G394	287 J	58.4 J	5.12 J	351 JT
G395	LW2-G395	0.533 J	0.826 J	0.357 J	1.72 JT
G396	LW2-G396	0.0599 U	0.0562 U	0.0692 UJ	0.0692 UJT
G397	LW2-G397	1.62	1.8	1.55 J	4.97 JT
G398	LW2-G398	0.317 J	0.785 J	0.204 U	1.1 JT
G399	LW2-G399	3.92 J	2.03 J	3.6 NJ	9.55 JT
G401	LW2-G401	3.82 NJ	2.94 NJ	2.19 NJ	8.95 JT
G403	LW2-G403	0.344 J	0.356 NJ	0.099 J	0.799 JT
G404	LW2-G404	2.7 J	3.6 J	2.16 J	8.46 JT
G405	LW2-G405	0.235 U	0.22 U	0.272 UJ	0.272 UJT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	72-54-8	72-55-9	50-29-3	Total 4,4'-DDD,
	Chemical Name	4,4'-DDD	4,4'-DDE	4,4'-DDT	-DDE, -DDT
	Unit	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID				
G406	LW2-G406	0.689 NJ	1.52 J	2.55 NJ	4.76 JT
G407	LW2-G407	1.9 J	2.11 J	0.0763 UJ	4.01 JT
G408	LW2-G408	4.1 NJ	3.16 NJ	2.97 NJ	10.2 JT
G409	LW2-G409	0.812	1.63	0.234 NJ	2.68 JT
G410-1	LW2-G410-1	1.82 J	1.98 J	2.33 J	6.13 JT
G410-2	LW2-G410-2	1.68 J	2.96 J	0.396 J	5.04 JT
G411	LW2-G411	0.22	0.099 NJ	0.259 J	0.578 JT
G412	LW2-G412	1.12 J	2.15 J	0.258 J	3.53 JT
G413	LW2-G413	0.349 J	0.36 J	0.093 NJ	0.802 JT
G414	LW2-G414	1.29 J	2.24 J	0.767 J	4.3 JT
G415	LW2-G415	6.64 J	4.27 NJ	10.7 J	21.6 JT
G416	LW2-G416	3.46 NJ	4.65 NJ	0.458 J	8.57 JT
G417	LW2-G417	2.18 J	0.51 NJ	0.417 J	3.11 JT
G418	LW2-G418	1.23 J	2.25 J	1.2 J	4.68 JT
G419	LW2-G419	1.05 J	1.29 J	0.323 J	2.66 JT
G420	LW2-G420	0.827	1.74	0.105 NJ	2.67 JT
G422	LW2-G422	4.33 NJ	3.31 J	0.89 J	8.53 JT
G423	LW2-G423	0.651 J	1.24 J	0.0964 UJ	1.89 JT
G424	LW2-G424	16.3 NJ	3.58 NJ	2.55 NJ	22.4 JT
G425	LW2-G425	0.295	0.141 J	0.0579 UJ	0.436 JT
G426	LW2-G426	2.87 J	3.66 J	0.807 J	7.34 JT
G427	LW2-G427	4.85 NJ	3.19 NJ	62.7 J	70.7 JT
G428	LW2-G428	0.929 J	1.37 J	0.421 J	2.72 JT
G429	LW2-G429	5.2 J	3.11	2.91 J	11.2 JT
G430	LW2-G430	0.149 J	0.0474 U	0.0584 UJ	0.149 JT
G431	LW2-G431	1.92	2.86	0.353 UJ	4.78 T
G432	LW2-G432	8.59 NJ	3.27 NJ	4.35 NJ	16.2 JT
G433-1	LW2-G433-1	0.301 J	1.89	0.0922 UJ	2.19 JT
G433-2	LW2-G433-2	0.898	1.94	0.178 J	3.02 JT
G434	LW2-G434	5.15 J	2.65 J	1.84 NJ	9.64 JT
G435	LW2-G435	0.769 J	2.19 J	0.41 J	3.37 JT
G437	LW2-G437	2.94 J	1.57 NJ	0.299 NJ	4.81 JT
G438	LW2-G438	1.43	1.04 J	0.486 J	2.96 JT
G439	LW2-G439	5.65 J	3.88 J	3.46 J	13 JT
G441	LW2-G441	1.97 J	5.34 J	2.02 J	9.33 JT
G442	LW2-G442	0.951 J	1.22 J	0.758 J	2.93 JT
G443	LW2-G443	0.338	0.842	0.172 U	1.18 T
G444	LW2-G444	74.5 J	115 J	1.71 J	191 JT
G445	LW2-G445	43.6 J	16.9 J	62.6	123 JT
G446	LW2-G446	1.19 J	0.651	1.95 NJ	3.79 JT
G450-1	LW2-G450-1	3.6	9.05	2.14 J	14.8 JT
G450-2	LW2-G450-2	2.45 NJ	6.02 NJ	5.2 J	13.7 JT
G451	LW2-G451	0.666	1.15	0.191 J	2.01 JT
G453	LW2-G453	1080	2240 J	28.8 NJ	3350 JT
G454	LW2-G454	0.259 U	0.243 U	0.299 UJ	0.299 UJT
G455	LW2-G455	13 J	17.9 J	2.36 J	33.3 JT
G456	LW2-G456	6.55 J	9.94 J	6.54 NJ	23 JT
G457	LW2-G457	3.34 J	5.76 J	2.21 NJ	11.3 JT
G458	LW2-G458	0.548	1.36	0.187 U	1.91 T
G459	LW2-G459	0.254 J	0.306 NJ	0.435 NJ	0.995 JT
G461	LW2-G461	1.93	4.55	0.734 J	7.21 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	72-54-8 4,4'-DDD ug/kg	72-55-9 4,4'-DDE ug/kg	50-29-3 4,4'-DDT ug/kg	Total 4,4'-DDD, -DDE, -DDT ug/kg
Location	Sample ID				
G463	LW2-G463	0.167 NJ	0.468 NJ		0.635 JT
G465	LW2-G465	0.571 J	0.949 J	0.0576 UJ	1.52 JT
G466	LW2-G466	0.827 J	1.45	0.0826 UJ	2.28 JT
G467	LW2-G467	3.02 J	7.35 NJ	6.71 J	17.1 JT
G468	LW2-G468	1.41	2.78	1.13 J	5.32 JT
G469	LW2-G469	0.505 J	1.09 J	0.919 J	2.51 JT
G470	LW2-G470	0.646 NJ	1.07 NJ	0.0783 UJ	1.72 JT
G472	LW2-G472	0.358 J	0.798 NJ		1.16 JT
G473	LW2-G473	10.1	13.7 J	9.04 J	32.8 JT
G474	LW2-G474	1.07 J	2.16 J	0.634 J	3.86 JT
G475-1	LW2-G475-1	0.785	1.56	0.0793 UJ	2.35 T
G475-2	LW2-G475-2	0.865 J	1.22	0.0827 UJ	2.09 JT
G476	LW2-G476	0.523 NJ	1.29 NJ		1.81 JT
G477	LW2-G477	5.34	10.2	6.17 J	21.7 JT
G478	LW2-G478	0.726	1.39	0.731 NJ	2.85 JT
G479	LW2-G479	1.1	1.99 J	0.0886 UJ	3.09 JT
G480	LW2-G480	11	19.6	1.64 NJ	32.2 JT
G481	LW2-G481	0.603 NJ	1.2 NJ		1.8 JT
G482	LW2-G482	1.32	2.52	0.282 J	4.12 JT
G483	LW2-G483	0.713	1.55	0.0864 UJ	2.26 T
G484	LW2-G484	0.93 NJ	1.68 NJ		2.61 JT
G485	LW2-G485	1.28	2.09	0.113 J	3.48 JT
G486	LW2-G486	1.19 J	1.79 J	0.458 J	3.44 JT
G487	LW2-G487	0.619 NJ	0.0453 UJ		0.619 JT
G488	LW2-G488	2.22	3.31	3.41 J	8.94 JT
G489	LW2-G489	0.937	2.07	0.26 J	3.27 JT
G490	LW2-G490	1.22 J	2.84 J	0.544 J	4.6 JT
G491	LW2-G491	1.11 J	2.36 J	0.285 J	3.76 JT
G492-1	LW2-G492-1	0.592 T	0.919 T	0.497 JT	2.01 JT
G492-2	LW2-G492-2	0.531	0.884 J	0.38 J	1.8 JT
G493	LW2-G493	0.846	1.78	0.404 U	2.63 T
G494	LW2-G494	1.44 J	1.3 J	0.84 J	3.58 JT
G495	LW2-G495	0.968 J	2.36 J	0.398 J	3.73 JT
G496	LW2-G496	0.172 J	0.407 J	0.726 NJ	1.31 JT
G497	LW2-G497	1.15 J	0.543 J	0.441 J	2.13 JT
G498	LW2-G498	0.85 J	2.35 J	0.151 NJ	3.35 JT
G499	LW2-G499	0.988	1.71	0.171 U	2.7 T
G500	LW2-G500	0.694 J	0.776 J	1.65 UJ	1.47 JT
G501	LW2-G501	1.3 J	2.67 J	0.659 NJ	4.63 JT
G502	LW2-G502	0.492 U	0.492 U	0.492 UJ	0.492 UT
G503	LW2-G503	1.47 J	1.8 NJ	4.47 J	7.74 JT
G504	LW2-G504	2.41	4.01	0.535 U	6.42 T
G505	LW2-G505	5.36 U	5.36 U	5.36 UJ	5.36 UT
G506	LW2-G506	1.49	1.57 J	0.46 U	3.06 JT
G507	LW2-G507	0.392	0.678	0.329 UJ	1.07 T
G508	LW2-G508	4.99 U	4.99 U	4.99 U	4.99 UT
G509	LW2-G509	0.971	1.47	0.256 U	2.44 T
G510	LW2-G510	1.09	1.99	0.315 U	3.08 T
G511	LW2-G511	0.554	1.12	0.081 U	1.67 T
G512	LW2-G512	0.479	0.776	0.518 UJ	1.26 T
G513	LW2-G513	0.627	0.946	0.919 U	1.57 T

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	72-54-8	72-55-9	50-29-3	Total 4,4'-DDD,
	Chemical Name	4,4'-DDD	4,4'-DDE	4,4'-DDT	-DDE, -DDT
	Unit	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID				
G514	LW2-G514	0.89	1.38	0.404 U	2.27 T
G515	LW2-G515	1.12	1.74	0.372 U	2.86 T
G516	LW2-G516	0.997	1.31 J	3.02 U	2.31 JT
G517	LW2-G517	2.21	1.83	0.218 U	4.04 T
G518	LW2-G518	6.75 J	3.02 J	3.9 U	9.77 JT
G519-1	LW2-G519-1	1.17 J	2.11 J	0.104 U	3.28 JT
G519-1	LW2-G519-2	1.75 J	2.52 J	1.01 J	5.28 JT
G520	LW2-G520	7.71	4.58	7.73 J	20 JT
G521	LW2-G521	30.8 J	9.5 J	38 J	78.3 JT
U1C-1	LW2-U1C-1	0.788 NJ	0.198 NJ		0.986 JT
U1C-2	LW2-U1C-2	0.414 NJ	0.299 NJ		0.713 JT
U1C-3	LW2-U1C-3	0.145 NJ	0.243 NJ		0.388 JT
U2C-1	LW2-U2C-1	0.597 NJ	0.557 NJ	0.317 J	1.47 JT
U2C-2	LW2-U2C-2	1.15 NJ	0.684 NJ		1.83 JT
U2C-3	LW2-U2C-3	0.252 NJ	0.247 NJ		0.499 JT
U3C-1	LW2-U3C-1	0.235 J	0.48	0.0624 UJ	0.715 JT
U3C-2	LW2-U3C-2	0.319 J	0.516	0.0709 UJ	0.835 JT
U3C-3	LW2-U3C-3	0.172 J	0.375	0.0678 UJ	0.547 JT
U4Q-1	LW2-U4Q-1	0.599 J	1.25	0.0798 UJ	1.85 JT
U4Q-2	LW2-U4Q-2	0.581 J	0.923 J	0.0705 UJ	1.5 JT
U4Q-3	LW2-U4Q-3	0.494 J	0.916	0.0694 UJ	1.41 JT
U5Q-1	LW2-U5Q-1	0.0507 U	0.087 J	0.0587 UJ	0.087 JT
U5Q-2	LW2-U5Q-2	0.12 J	0.12 J	0.0585 UJ	0.24 JT
U5Q-3	LW2-U5Q-3	0.0529 U	0.099 J	0.0611 UJ	0.099 JT
U6TOC-1	LW2-U6TOC-1	0.676 J	1.1 J	0.163 NJ	1.94 JT
U6TOC-2	LW2-U6TOC-2	0.964 J	2.06	0.963 J	3.99 JT
U6TOC-3	LW2-U6TOC-3	0.638 J	1.32	0.167 J	2.13 JT
Subsurface Sediment Samples					
C009	LW2-C009-B	2.7 NJ	0.531 NJ	0.272 NJ	3.5 JT
C009	LW2-C009-C	3.22 NJ	2.99 NJ	0.177 J	6.39 JT
C011-1	LW2-C011-B1	3 NJT	0.531 JT	0.405 JT	3.94 JT
C011-1	LW2-C011-C1	11.3 T	10.1 T	1.63 JT	23 JT
C011-1	LW2-C011-D1	7.14 JT	2.5 JT	0.606 UJT	9.64 JT
C011-2	LW2-C011-B2	2.1 J	0.459 NJ	0.259 NJ	2.82 JT
C011-2	LW2-C011-C2	19.8 NJ	3.19 NJ	1.37 NJ	24.4 JT
C011-2	LW2-C011-D2	7.73 J	10.5 J	0.648 J	18.9 JT
C011-2	LW2-C011-E2	4.47	1.91	0.803 NJ	7.18 JT
C015	LW2-C015-B	4.48 J	3.42 NJ	0.39 NJ	8.29 JT
C015	LW2-C015-C	11.6 NJ	4.05 NJ	1.34 J	17 JT
C015	LW2-C015-D	28.6 NJ	9.14 NJ	3.59 J	41.3 JT
C019-1	LW2-C019-B1	1.58 NJ	1.37 NJ	0.628 J	3.58 JT
C019-1	LW2-C019-C1	12.2 NJ	0.465 U		12.2 JT
C020	LW2-C020-B	3.14 NJ	3.75 NJ	0.507 J	7.4 JT
C020	LW2-C020-C	10.4 NJ	3.66 NJ	40.5 J	54.6 JT
C022	LW2-C022-B	3.39 NJ	5.15 NJ	0.441 J	8.98 JT
C022	LW2-C022-C	3.6 NJ	3.57 NJ	0.736 NJ	7.91 JT
C025-1	LW2-C025-B1	0.0514 U	2.23 NJ	0.477 NJ	2.71 JT
C025-1	LW2-C025-C1	0.0621 U	0.0583 U	0.0718 UJ	0.0718 UJT
C025-2	LW2-C025-D2	0.0505 UJ	0.0473 UJ	0.0584 UJ	0.0584 UJT
C027	LW2-C027-B	0.534 J	0.489 J	0.071 NJ	1.09 JT
C027	LW2-C027-C	0.289 J	0.244 J	0.0694 UJ	0.533 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	72-54-8 4,4'-DDD ug/kg	72-55-9 4,4'-DDE ug/kg	50-29-3 4,4'-DDT ug/kg	Total 4,4'-DDD, -DDE, -DDT ug/kg
Location	**Sample ID**				
C034	LW2-C034-B	0.182 J	0.079 J	0.083 NJ	0.344 JT
C034	LW2-C034-C	0.519 J	0.235 J	0.115 J	0.869 JT
C034	LW2-C034-E	1.25 J	0.706 J	0.149 J	2.11 JT
C038	LW2-C038-B	1.56 NJ	0.226 NJ		1.79 JT
C038	LW2-C038-C	0.803 NJ	0.281 NJ	0.191 NJ	1.28 JT
C038	LW2-C038-D	0.0581 UJ	0.147 J	0.0672 UJ	0.147 JT
C060	LW2-C060-B	101 J	7.81 J	3.1 J	112 JT
C060	LW2-C060-C	59.7 J	5.46 J	1.88 J	67 JT
C062	LW2-C062-B	0.0485 UJ	0.0455 U	0.0561 UJ	0.0561 UJT
C062	LW2-C062-C	0.0519 UJ	0.0487 U	0.06 UJ	0.06 UJT
C062	LW2-C062-D	0.0513 UJ	0.0481 U	0.0594 UJ	0.0594 UJT
C064	LW2-C064-B	0.328 UJ	0.307 UJ	0.379 UJ	0.379 UJT
C064	LW2-C064-C	0.0582 UJ	0.0545 UJ	0.0672 UJ	0.0672 UJT
C066	LW2-C066-B	0.496 J	0.232 J	0.129 J	0.857 JT
C066	LW2-C066-C	0.0565 UJ	0.053 UJ	0.197 NJ	0.197 JT
C067	LW2-C067-B	4.92 J	3.63 J	1.84 J	10.4 JT
C067	LW2-C067-D	33.6 J	12.4 J	1.84 J	47.8 JT
C067	LW2-C067-E	0.604 J	0.453 J	0.342 UJ	1.06 JT
C073	LW2-C073-B	0.727 J	0.383 J	0.0594 UJ	1.11 JT
C073	LW2-C073-C	8.22 J	5.38 J	0.724 J	14.3 JT
C073	LW2-C073-D	10.8 J	2.11 J	1.51 J	14.4 JT
C074	LW2-C074-B	2.41 J	2.54 J	0.394 J	5.34 JT
C074	LW2-C074-C	0.616 J	0.412 J	0.295 UJ	1.03 JT
C074	LW2-C074-D	0.583 J	0.896 J	0.13 J	1.61 JT
C074	LW2-C074-F	0.0515 UJ	0.0483 U	0.0595 UJ	0.0595 UJT
C077	LW2-C077-C	27 J	2.64 J	2.3 J	31.9 JT
C077	LW2-C077-D	0.407 J	0.0562 UJ	0.0693 UJ	0.407 JT
C086	LW2-C086-B	1.98 J	1.77 J	0.751 J	4.5 JT
C086	LW2-C086-C	0.0436 UJ	0.0409 UJ	0.0504 UJ	0.0504 UJT
C093	LW2-C093-B	75.3	77.8	17.7	171 T
C093	LW2-C093-C	0.0516 U	0.0484 U	0.0596 U	0.0596 UT
C105	LW2-C105-B	3.06 J	0.822 J	0.132 J	4.01 JT
C105	LW2-C105-C	0.0599 UJ	0.0561 U	0.0692 UJ	0.0692 UJT
C111-1	LW2-C111-B	4.92 J	6.03 J	0.833 J	11.8 JT
C111-1	LW2-C111-C	6.78 J	7.65 J	0.628 J	15.1 JT
C111-1	LW2-C111-F	0.281 UJ	0.263 U	0.324 UJ	0.324 UJT
C111-2	LW2-C111-B2	3.62 J	3.94 J	0.598 J	8.16 JT
C111-2	LW2-C111-C2	12.2 J	12.1 J	1.88 J	26.2 JT
C111-2	LW2-C111-E2	24.2 J	9.89 J	2.02 J	36.1 JT
C112	LW2-C112-B	2.92 J	3.66 J	0.745 J	7.33 JT
C112	LW2-C112-C	18.6 J	10.8	7.38 J	36.8 JT
C112	LW2-C112-D	19 J	12.3 J	3.27 J	34.6 JT
C121	LW2-C121-B	25.8 J	4.23 J	5.32 J	35.4 JT
C121	LW2-C121-C	9.51 J	1.61 J	0.376 NJ	11.5 JT
C122	LW2-C122-B	8.72	5.03	2.35 J	16.1 JT
C122	LW2-C122-C	126	14.9	3.73 J	145 JT
C130	LW2-C130-B	6.94	2.99	0.723 NJ	10.7 JT
C130	LW2-C130-C	0.0457 U	0.0428 U	0.0528 UJ	0.0528 UJT
C130	LW2-C130-E	0.0527 U	0.0494 U	0.0609 UJ	0.0609 UJT
C133	LW2-C133-B	6.74 NJ	3.51 NJ	3.17 J	13.4 JT
C133	LW2-C133-D	36.3 NJ	10.1 NJ	5.64 J	52 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	72-54-8 4,4'-DDD ug/kg	72-55-9 4,4'-DDE ug/kg	50-29-3 4,4'-DDT ug/kg	Total 4,4'-DDD, -DDE, -DDT ug/kg
Location	Sample ID				
C136	LW2-C136-B	29.8 J	6	3.11 J	38.9 JT
C136	LW2-C136-C	31.3	13.4 J	1.55 J	46.3 JT
C136	LW2-C136-D	56.3	7.95 J	1.44 NJ	65.7 JT
C139	LW2-C139-B	7.42 NJ	3.26 NJ	19.2 NJ	29.9 JT
C139	LW2-C139-C	8.25 NJ	3.48 NJ		11.7 JT
C142	LW2-C142-B	117	14.4	8.68 J	140 JT
C142	LW2-C142-C	145	12.8	6.95 J	165 JT
C147	LW2-C147-B	19.9	9.53	23.6 J	53 JT
C147	LW2-C147-C	226	24.7	482 J	733 JT
C147	LW2-C147-E	35.7	7.83 J	4.04 J	47.6 JT
C155	LW2-C155-B	0.313 U	0.293 U	0.362 UJ	0.362 UJT
C155	LW2-C155-C	0.312 U	0.293 U	0.361 UJ	0.361 UJT
C157	LW2-C157-B	0.644 J	0.312 UJ	1.52 NJ	2.16 JT
C157	LW2-C157-C	0.308 UJ	0.289 UJ	0.356 UJ	0.356 UJT
C160	LW2-C160-B	0.554 J	0.309 UJ	0.381 UJ	0.554 JT
C160	LW2-C160-C	0.316 UJ	0.296 UJ	0.365 UJ	0.365 UJT
C161	LW2-C161-B	0.577 J	0.32 UJ	0.394 UJ	0.577 JT
C161	LW2-C161-C	0.284 UJ	0.267 UJ	0.329 UJ	0.329 UJT
C163-1	LW2-C163-B1	0.175 J	0.0446 UJ	0.055 UJ	0.175 JT
C163-1	LW2-C163-C1	0.0733 UJ	0.093 J	0.0847 UJ	0.093 JT
C163-2	LW2-C163-B2	0.0445 UJT	0.0417 UJT	0.0514 UJT	0.0514 UJT
C163-2	LW2-C163-C2	0.295 UJT	0.277 UJT	0.342 UJT	0.342 UJT
C164	LW2-C164-B	0.598 J	0.527 J	0.241 J	1.37 JT
C164	LW2-C164-C	0.439 J	0.395 NJ	0.1 J	0.934 JT
C164	LW2-C164-E	38.3	15	35.5 J	88.8 JT
C166	LW2-C166-B	2.16 J	1.55 J	0.321 UJ	3.71 JT
C166	LW2-C166-C	142 J	10.1 J	5.4 J	158 JT
C166	LW2-C166-D	56.7 J	18.2 J	6.93 J	81.8 JT
C170	LW2-C170-B	5.67 NJ	0.283 U	2.69 NJ	8.36 JT
C170	LW2-C170-C	0.254 NJ	0.0472 U		0.254 JT
C171	LW2-C171-B	14.6 J	4.42 NJ	0.751 J	19.8 JT
C171	LW2-C171-C	176 J	7.5 NJ	74.3 J	258 JT
C172	LW2-C172-B	5.37 NJ	3.21 NJ	1.34 J	9.92 JT
C172	LW2-C172-C	40.4 NJ	15.3 NJ	22.6 J	78.3 JT
C176	LW2-C176-B	7.29 J	2.96 J	1.24 J	11.5 JT
C176	LW2-C176-C	2.06	0.405	0.065 UJ	2.47 T
C176	LW2-C176-G	0.052 U	0.0488 U	0.0601 UJ	0.0601 UJT
C179	LW2-C179-B	53.4 NJ	8.45 NJ	24.3 J	86.2 JT
C179	LW2-C179-C	1.42 NJ	0.317 U	1.01 NJ	2.43 JT
C179	LW2-C179-D	0.32 UJ	0.3 U	0.37 UJ	0.37 UJT
C182	LW2-C182-B	26.9 NJ	6.69 NJ	6.58 J	40.2 JT
C182	LW2-C182-C	144 J	15.4 NJ	29.2 J	189 JT
C184	LW2-C184-B	17.1 J	6.39 J	4.78 J	28.3 JT
C184	LW2-C184-C	190 J	19.7	28.4 J	238 JT
C184	LW2-C184-D	0.291 J	0.145 NJ	0.0655 UJ	0.436 JT
C192	LW2-C192-B	9.76 J	4.8 J	0.756 J	15.3 JT
C192	LW2-C192-C	68.1 J	8.54 J	7.24 J	83.9 JT
C192	LW2-C192-D	0.844 J	0.232 U	0.286 UJ	0.844 JT
C197	LW2-C197-B	16.4 NJ	7.74 NJ	0.784 NJ	24.9 JT
C197	LW2-C197-C	185 J	18.2 NJ	57.9 J	261 JT
C197	LW2-C197-D	0.176 NJ	0.0427 U		0.176 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	72-54-8	72-55-9	50-29-3	Total 4,4'-DDD,
	Chemical Name	4,4'-DDD	4,4'-DDE	4,4'-DDT	-DDE, -DDT
	Unit	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID				
C199	LW2-C199-B	7.22 NJ	1.3 NJ	0.422 NJ	8.94 JT
C199	LW2-C199-C	0.0573 U	0.093 NJ	0.2 NJ	0.293 JT
C202	LW2-C202-B	38.2 J	12.3	6.53 J	57 JT
C202	LW2-C202-C	116 NJ	9.52 NJ	64.9 J	190 JT
C203	LW2-C203-B	3.75 J	2.19 J	0.664 NJ	6.6 JT
C203	LW2-C203-C	101 NJ	9.9 J	10.8 J	122 JT
C203	LW2-C203-E	0.0566 UJ	0.053 U	0.0654 UJ	0.0654 UJT
C206	LW2-C206-B	57.5 J	14.3 J	39.4 J	111 JT
C206	LW2-C206-C	0.093	0.0418 U	0.0516 UJ	0.093 T
C207-1	LW2-C207-B	25.6 NJ	4.06 NJ	3.35 J	33 JT
C207-1	LW2-C207-C	0.0556 UJ	0.0521 UJ	0.0643 UJ	0.0643 UJT
C207-1	LW2-C207-D	0.302 UJ	0.283 U	0.349 UJ	0.349 UJT
C207-2	LW2-C207-B2	13.4 NJT	2.66 NJT	15.6 JT	31.7 JT
C207-2	LW2-C207-C2	0.0569 UJT	0.0534 UJT	0.0712 UJT	0.0712 UJT
C210	LW2-C210-B	0.0547 U	0.08 J	0.0632 UJ	0.08 JT
C210	LW2-C210-C	0.0506 U	0.0475 U	0.0585 UJ	0.0585 UJT
C213	LW2-C213-B	0.0484 U	0.0454 U	0.0559 UJ	0.0559 UJT
C213	LW2-C213-C	0.0527 U	0.0494 U	0.0609 UJ	0.0609 UJT
C213	LW2-C213-D	0.0514 U	0.0482 U	0.0594 UJ	0.0594 UJT
C220	LW2-C220-B	3.26 NJ	0.345 NJ	1.56 NJ	5.17 JT
C220	LW2-C220-C	0.989 NJ	0.619 NJ		1.61 JT
C221	LW2-C221-B	9.94 NJ	0.758 NJ	2.81 J	13.5 JT
C221	LW2-C221-C	3.4 NJ	0.248 U	1.66 NJ	5.06 JT
C228	LW2-C228-B	44.6 NJ	4.44 NJ	1.85 NJ	50.9 JT
C231	LW2-C231-B	130 J	22.9 J	6.53 NJ	159 JT
C231	LW2-C231-C	2.27 NJ	0.663 NJ		2.93 JT
C232	LW2-C232-B	0.289 NJ	0.126 NJ	0.107 J	0.522 JT
C232	LW2-C232-C	0.0502 U	0.047 U	0.058 UJ	0.058 UJT
C240	LW2-C240-B	27.7 J	8.64	21.6 J	57.9 JT
C240	LW2-C240-D	8.63 J	1.54 J	10.6 NJ	20.8 JT
C240	LW2-C240-E	1.59 U	1.49 U	3.93 J	3.93 JT
C244	LW2-C244-B	4.04 NJ	2.25 NJ	1.03 NJ	7.32 JT
C244	LW2-C244-C	25.1 NJ	6.54 NJ	16.2 J	47.8 JT
C245	LW2-C245-B	0.734 NJ	0.311 U		0.734 JT
C245	LW2-C245-C	88.4 J	14.7 NJ	47.2 J	150 JT
C245	LW2-C245-D	0.749 NJ	0.3 U		0.749 JT
C245	LW2-C245-E	0.0562 U	0.1 NJ		0.1 JT
C247	LW2-C247-B	0.872 NJ	0.0497 UJ	0.431 J	1.3 JT
C247	LW2-C247-C	0.169 NJ	0.0495 UJ		0.169 JT
C247	LW2-C247-D	0.0541 UJ	0.0507 UJ	0.0625 UJ	0.0625 UJT
C252	LW2-C252-B	19.1 NJ	1.7 NJ	5.54 NJ	26.3 JT
C252	LW2-C252-C	60.6 J	6.57 J	6.44 NJ	73.6 JT
C254	LW2-C254-B	14	3.95	2.42 J	20.4 JT
C254	LW2-C254-C	0.0415 U	0.0389 U	0.087 J	0.087 JT
C255	LW2-C255-B	0.0481 U	0.0451 U	0.0556 UJ	0.0556 UJT
C255	LW2-C255-C	0.253 NJ	0.0424 U	0.113 J	0.366 JT
C257	LW2-C257-B	157 NJ	9.24 NJ	246 J	412 JT
C258	LW2-C258-B	3.66 J	0.247 U	3.44 NJ	7.1 JT
C258	LW2-C258-C	7.6 NJ	0.238 UJ	7.1 NJ	14.7 JT
C260	LW2-C260-B	19 J	1.05 J	30 J	50.1 JT
C260	LW2-C260-C	35.9 J	13.8 NJ	5.43 J	55.1 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	72-54-8	72-55-9	50-29-3	Total 4,4'-DDD,
	Chemical Name	4,4'-DDD	4,4'-DDE	4,4'-DDT	-DDE, -DDT
	Unit	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID				
C263	LW2-C263-B	345 J	16.6 NJ	21.4 J	383 JT
C263	LW2-C263-D	177 J	10.4 NJ	24.9 J	212 JT
C264	LW2-C264-B	71.2 J	15.7 NJ	12.8 J	99.7 JT
C264	LW2-C264-C	22.1 NJ	4.36 NJ	1.67 NJ	28.1 JT
C266	LW2-C266-B	0.0446 UJ	0.0418 UJ	0.0516 UJ	0.0516 UJT
C266	LW2-C266-C	89.7 J	6.7 J	92.1 J	189 JT
C267	LW2-C267-B	40.6 NJ	5.16 J	15.4 J	61.2 JT
C267	LW2-C267-C	2.79	0.218 J	1.58 J	4.59 JT
C268	LW2-C268-B	0.297 NJ	0.0464 U	0.495 J	0.792 JT
C268	LW2-C268-C	0.0424 U	0.0397 U	0.049 UJ	0.049 UJT
C269	LW2-C269-B	283 J	34.5 NJ	223 J	541 JT
C269	LW2-C269-C	162 J	25.3 NJ	25.2 J	213 JT
C269	LW2-C269-F	3.38 NJ	1.6 NJ	7.15 NJ	12.1 JT
C270	LW2-C270-B	163 J	27.6	19.9 NJ	211 JT
C270	LW2-C270-C	155 J	19.8	164	339 JT
C272	LW2-C272-B	0.129 J	0.0448 U	0.0552 U	0.129 JT
C272	LW2-C272-C	0.0445 U	0.0417 U	0.094	0.094 T
C273	LW2-C273-B	23.3	2.02	30.2 NJ	55.5 JT
C273	LW2-C273-C	0.63 U	2.02 NJ	25.8 NJ	27.8 JT
C276	LW2-C276-B	78.8 J	12.2 NJ	8.73 J	99.7 JT
C276	LW2-C276-C	99.1 NJ	14.9 NJ	76.6 J	191 JT
C277	LW2-C277-B	0.0768 U	4.05 NJ	0.628 J	4.68 JT
C277	LW2-C277-C	4 NJ	10.5 NJ	0.991 J	15.5 JT
C277	LW2-C277-D	89.7 NJ	17.6 NJ	32.5 J	140 JT
C278	LW2-C278-B	51.4 J	11.8 J	9.56 J	72.8 JT
C278	LW2-C278-C	130 J	9.54 J	7.04 J	147 JT
C278	LW2-C278-D	0.128 J	0.0488 U	0.0601 UJ	0.128 JT
C280	LW2-C280-B	0.345 U	0.324 U	0.399 U	0.399 UT
C280	LW2-C280-C	0.297 U	0.278 U	0.343 U	0.343 UT
C280	LW2-C280-D	0.261 U	0.245 U	0.302 U	0.302 UT
C282	LW2-C282-B	0.0468 UJ	0.0439 UJ	0.0541 UJ	0.0541 UJT
C282	LW2-C282-C	0.0437 UJ	0.041 UJ	0.0505 UJ	0.0505 UJT
C282	LW2-C282-D	0.0468 UJ	0.0438 UJ	0.054 UJ	0.054 UJT
C283	LW2-C283-B	504 NJ	54.9 NJ	72.2 J	631 JT
C283	LW2-C283-C	98.2 NJ	3.9 NJ	15.6 J	118 JT
C283	LW2-C283-E	0.0521 U	0.0488 U	0.0602 UJ	0.0602 UJT
C284	LW2-C284-B	35.1 NJ	8.97 NJ	10.7 J	54.8 JT
C284	LW2-C284-C	156 NJ	22.1 NJ	90.7 NJ	269 JT
C284	LW2-C284-D	2.15 NJ	0.245 U	1.27 J	3.42 JT
C288	LW2-C288-B	44.8 J	13.6	8.88 NJ	67.3 JT
C288	LW2-C288-C	17.6 J	1.92 NJ	17.3 J	36.8 JT
C288	LW2-C288-D	1.52 NJ	0.296 U	0.365 UJ	1.52 JT
C293-1	LW2-C293-B	4.28 J	8.08 J	0.795 J	13.2 JT
C293-1	LW2-C293-C	104 NJ	17.8	20.6 J	142 JT
C293-1	LW2-C293-D	0.212 J	0.0625 UJ	0.681 NJ	0.893 JT
C293-2	LW2-C293-B2	31.1 NJ	14.9 NJ	8.22 J	54.2 JT
C293-2	LW2-C293-C2	1.77 NJ	0.326 U	8.09 J	9.86 JT
C294	LW2-C294-B	408 J	7.41 J	20 J	435 JT
C294	LW2-C294-C	10.6 J	0.619 U	14.9 NJ	25.5 JT
C294	LW2-C294-D	3.38 NJ	0.551 U	0.679 UJ	3.38 JT
C295	LW2-C295-B	6.04	6.84	1.07 J	14 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	72-54-8	72-55-9	50-29-3	Total 4,4'-DDD,
	Chemical Name	4,4'-DDD	4,4'-DDE	4,4'-DDT	-DDE, -DDT
	Unit	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID				
C295	LW2-C295-C	1150	44.1	157 J	1350 JT
C301	LW2-C301-B	341 NJ	59.5 NJ	68.3 J	469 JT
C301	LW2-C301-C	972 NJ	101 NJ	830 J	1900 JT
C301	LW2-C301-D	183 NJ	6.45 NJ	103 NJ	292 JT
C301	LW2-C301-E	571 NJ	16.8 U	446 J	1020 JT
C301	LW2-C301-G	43.3 NJ	1.09 U	61.5 J	105 JT
C302	LW2-C302-B	369	58.8	41.7 J	470 JT
C302	LW2-C302-C	717 J	48.5 J	286 NJ	1050 JT
C305-1	LW2-C305-B1	206 J	13.8	35.4 J	255 JT
C305-1	LW2-C305-C1	68.4 J	12.1 J	1060 J	1140 JT
C305-1	LW2-C305-D1	2.8 J	0.445 J	6.81 J	10.1 JT
C305-2	LW2-C305-B2	116 J	17.9 J	4.16 NJ	138 JT
C305-2	LW2-C305-C2	164 J	23.4	38.5 J	226 JT
C305-2	LW2-C305-D2	2.48	0.13	0.317 J	2.93 JT
C311	LW2-C311-B	157 NJ	7.01 J	28.7 J	193 JT
C311	LW2-C311-C	3.08 J	3.55 NJ	0.783 UJ	6.63 JT
C311	LW2-C311-E	0.587 U	0.551 U	0.679 UJ	0.679 UJT
C313	LW2-C313-B	0.514 J	0.219 J	0.06 UJ	0.733 JT
C313	LW2-C313-C	0.0561 UJ	0.0526 UJ	0.0649 UJ	0.0649 UJT
C314	LW2-C314-B	60.3 J	12 J	13.3 J	85.6 JT
C314	LW2-C314-C	2180 J	50 J	403 J	2630 JT
C316	LW2-C316-B	74.4 J	7.52 NJ	31.6 J	114 JT
C316	LW2-C316-C	710 J	53.5 J	71.2 J	835 JT
C316	LW2-C316-D	4750 J	130 J	376 J	5260 JT
C323	LW2-C323-B	27 J	4.48 J	2.97 J	34.5 JT
C323	LW2-C323-C	3.85 J	1.91 J	0.243 J	6 JT
C323	LW2-C323-D	11.3 J	1.46	0.626 J	13.4 JT
C324	LW2-C324-B	3.73 J	2.44 J	1.28 NJ	7.45 JT
C324	LW2-C324-D	8.23 J	1.46 J	0.961 J	10.7 JT
C324	LW2-C324-E	26.4 J	7.51 J	2.53 J	36.4 JT
C326	LW2-C326-B	7.52 J	4.48 J	1.68 J	13.7 JT
C326	LW2-C326-C	9.05 J	0.517 J	0.0563 UJ	9.57 JT
C327	LW2-C327-B	4.71	1.45	0.563 J	6.72 JT
C327	LW2-C327-C	5.87	2.36	1.01 J	9.24 JT
C329	LW2-C329-B	19.6 J	0.786 J	0.95 J	21.3 JT
C329	LW2-C329-C	26.5 J	2.66 NJ	4.58 NJ	33.7 JT
C329	LW2-C329-D	8.71 J	0.245 U	7.82 NJ	16.5 JT
C331	LW2-C331-B	8.8 NJ	0.914 J	0.769 J	10.5 JT
C331	LW2-C331-C	16.9 NJ	1.49 J	12.2 J	30.6 JT
C331	LW2-C331-D	0.176 J	0.0499 U	0.14 J	0.316 JT
C331	LW2-C331-E	0.093 J	0.0499 U	0.086 J	0.179 JT
C332	LW2-C332-B	862 J	60.3 J	934 J	1860 JT
C332	LW2-C332-C	0.881	0.0474 U	0.289	1.17 T
C333	LW2-C333-B	40 J	6.03 J	1.53 J	47.6 JT
C333	LW2-C333-C	0.0475 U	0.0445 U	0.0548 U	0.0548 UT
C333	LW2-C333-E	0.0552 U	0.0517 U	0.0638 U	0.0638 UT
C334	LW2-C334-B	291 J	62.4 J	256 J	609 JT
C334	LW2-C334-C	3.69	0.366 NJ	1.61 NJ	5.67 JT
C335	LW2-C335-B	273 J	48.4 NJ	984 J	1310 JT
C335	LW2-C335-C	0.0431 UJ	0.0404 UJ	0.0498 UJ	0.0498 UJT
C341	LW2-C341-B	20.8 NJ	6.79 NJ	30.4 J	58 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	72-54-8	72-55-9	50-29-3	Total 4,4'-DDD,
	Chemical Name	4,4'-DDD	4,4'-DDE	4,4'-DDT	-DDE, -DDT
	Unit	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID				
C342	LW2-C342-B	4.47 J	4.12 J	1 J	9.59 JT
C342	LW2-C342-C	18.8 J	7.11 J	1.51 J	27.4 JT
C342	LW2-C342-D	0.531 J	0.25 U	0.688 J	1.22 JT
C346	LW2-C346-B	12.7	4.44	22.4	39.5 T
C346	LW2-C346-C	0.301 U	0.282 U	0.348 U	0.348 UT
C347	LW2-C347-B	3.9 J	2.95 J	0.991 J	7.84 JT
C347	LW2-C347-C	0.0715 U	0.067 U	0.0826 UJ	0.0826 UJT
C347	LW2-C347-F	23.5 J	6.94 J	465 J	495 JT
C348	LW2-C348-B	227 NJ	51.7 NJ	267 J	546 JT
C348	LW2-C348-C	51800 NJ	992 J	19900 J	72700 JT
C348	LW2-C348-D	12.3 J	0.551 J	3.84 J	16.7 JT
C349	LW2-C349-B	19.1 J	4.75 NJ	1.14 J	25 JT
C349	LW2-C349-C	11.6 J	7.38 NJ	2.61 J	21.6 JT
C351	LW2-C351-B	4280 NJ	84.1 J	2780 J	7140 JT
C351	LW2-C351-C	1.54 J	0.069 J	1.08 J	2.69 JT
C351	LW2-C351-D	0.243 NJ	0.0462 U	0.263 J	0.506 JT
C351	LW2-C351-E	0.116 NJ	0.0454 U	0.125 J	0.241 JT
C352	LW2-C352-B	2.43	4.19 J	0.517 J	7.14 JT
C352	LW2-C352-C	3.19	4.21	0.665	8.07 T
C352	LW2-C352-D	1.16	0.337	0.274	1.77 T
C356	LW2-C356-B	320 NJ	24.3 NJ	341 J	685 JT
C356	LW2-C356-C	28200 NJ	763 NJ	22000 J	51000 JT
C356	LW2-C356-E	181 NJ	6.1	21.8 J	209 JT
C357	LW2-C357-B	2.99 NJ	3.28 NJ	0.507 J	6.78 JT
C357	LW2-C357-C	6.32 NJ	2.04 NJ	0.998 J	9.36 JT
C359	LW2-C359-B	141	42.3	445 J	628 JT
C359	LW2-C359-C	269 J	31	639 J	939 JT
C359	LW2-C359-D	5120 J	204 J	11400 J	16700 JT
C361	LW2-C361-B	4.5 NJ	3.92 NJ	0.593 J	9.01 JT
C362	LW2-C362-B	65.2 NJ	15.8 NJ	25.7 J	107 JT
C362	LW2-C362-C	26.8 NJ	5.38 NJ	28.2 J	60.4 JT
C362	LW2-C362-D	32.1 J	9.33 NJ	32.1 J	73.5 JT
C364	LW2-C364-B	42 J	9.85 J	1.48 NJ	53.3 JT
C364	LW2-C364-C	0.92 NJ	0.282 U		0.92 JT
C366-1	LW2-C366-B1	464 NJT	82.4 NJT	718 JT	1260 JT
C366-1	LW2-C366-C1	566 NJT	65.6 NJT	492 JT	1120 JT
C366-1	LW2-C366-D1	47.7 JT	6.44 NJT	32.6 JT	86.7 JT
C366-1	LW2-C366-E1	208 NJT	13.2 NJT	75 JT	296 JT
C366-1	LW2-C366-G1	0.213 NJT	0.048 UT		0.213 JT
C366-2	LW2-C366-B2	863 NJ	169 NJ	274 NJ	1310 JT
C366-2	LW2-C366-C2	374 NJ	40.3 NJ	191 J	605 JT
C366-2	LW2-C366-D2	194 NJ	12.7 NJ	121 J	328 JT
C366-2	LW2-C366-F2	2.85 NJ	0.627 NJ	3.78 J	7.26 JT
C368	LW2-C368-B	101 J	41.3	144	286 JT
C368	LW2-C368-C	38.8 J	4.57 J	39.8 J	83.2 JT
C368	LW2-C368-D	2.49 U	8.47 J	7.1 J	15.6 JT
C368	LW2-C368-E	0.24 U	1.26	4.33 NJ	5.59 JT
C371	LW2-C371-B	69.8 NJ	16.2 NJ	48 J	134 JT
C371	LW2-C371-C	29.6 NJ	2.4 NJ		32 JT
C371	LW2-C371-E	0.764 NJ	0.0455 U		0.764 JT
C372	LW2-C372-B	0.955	2.18	0.354 UJ	3.14 T

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	72-54-8	72-55-9	50-29-3	Total 4,4'-DDD,
	Chemical Name	4,4'-DDD	4,4'-DDE	4,4'-DDT	-DDE, -DDT
	Unit	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID				
C372	LW2-C372-C	0.27 U	0.253 U	0.312 UJ	0.312 UJT
C377	LW2-C377-B	23.6 NJ	4.23 NJ	22.5 J	50.3 JT
C377	LW2-C377-C	52.3 NJ	9.94 NJ	16 J	78.2 JT
C377	LW2-C377-E	165 NJ	14.5 NJ	2.9 J	182 JT
C379	LW2-C379-B	3.11	7.24 J	3.58 J	13.9 JT
C379	LW2-C379-C	5.65 J	5.09 J	17.3 J	28 JT
C379	LW2-C379-D	0.0548 U	0.0514 UJ	0.0633 UJ	0.0633 UJT
C380	LW2-C380-B	0.0634 U	0.0595 U	0.0733 UJ	0.0733 UJT
C380	LW2-C380-C	0.0599 UJ	0.0562 UJ	0.0692 UJ	0.0692 UJT
C382	LW2-C382-B	225 J	22.3 J	3.72 J	251 JT
C382	LW2-C382-C	9.84 J	1.09	0.0639 UJ	10.9 JT
C383	LW2-C383-B	0.476 J	0.213 NJ	0.651 NJ	1.34 JT
C383	LW2-C383-C	0.0589 U	0.0552 U	0.174 J	0.174 JT
C384	LW2-C384-B	10.4	9.17 NJ	18.8 J	38.4 JT
C384	LW2-C384-C	1.03	0.287 NJ	0.416 J	1.73 JT
C386	LW2-C386-B	0.766 NJ	7.33 NJ	0.434 NJ	8.53 JT
C386	LW2-C386-C	0.0438 U	0.041 U	0.0506 UJ	0.0506 UJT
C392	LW2-C392-B	1.69 J	3.15 J	0.875 NJ	5.72 JT
C392	LW2-C392-C	4.36 J	1.66 J	0.687 J	6.71 JT
C393	LW2-C393-B	1.69 NJ	0.945 NJ	1.42 J	4.06 JT
C393	LW2-C393-C	0.0463 U	0.0434 U	0.0535 UJ	0.0535 UJT
C396	LW2-C396-B	1.39 NJ	0.254 J	2.07 NJ	3.71 JT
C396	LW2-C396-C	0.165 NJ	0.0591 U	0.274 J	0.439 JT
C397	LW2-C397-B	3.61	5.8 J	1.1 J	10.5 JT
C397	LW2-C397-C	3.76 J	4.82 J	2.06 J	10.6 JT
C397	LW2-C397-D	5.31 J	5.26 J	1.18 NJ	11.8 JT
C401	LW2-C401-B	8.04 NJ	3.8 NJ	9.66 J	21.5 JT
C401	LW2-C401-C	5.94 NJ	1.58 NJ		7.52 JT
C401	LW2-C401-D	6.76	3.06 J	0.769 J	10.6 JT
C401	LW2-C401-E	12.4 J	12.3	0.845 J	25.5 JT
C403	LW2-C403-B	0.31 J	0.218	0.0581 UJ	0.528 JT
C403	LW2-C403-C	0.0503 U	0.0472 U	0.0582 UJ	0.0582 UJT
C403	LW2-C403-D	0.057 U	0.0535 U	0.0659 UJ	0.0659 UJT
C405	LW2-C405-B	6.27 J	2.18 J	3.29 J	11.7 JT
C405	LW2-C405-C	1.52 J	1.26 NJ	0.858 NJ	3.64 JT
C409	LW2-C409-B	1.82	2.24 J	0.938 J	5 JT
C409	LW2-C409-C	4.22	1.7	1.42	7.34 T
C413-1	LW2-C413-B1	11.6 NJ	10.7 NJ	0.809 J	23.1 JT
C413-1	LW2-C413-C1	18.1 NJ	8.61 NJ	0.916 J	27.6 JT
C413-2	LW2-C413-B2	9.36 NJ	7.62 NJ	1.25 J	18.2 JT
C413-2	LW2-C413-C2	11.1 NJ	11.5 NJ	0.97 NJ	23.6 JT
C413-2	LW2-C413-D2	106 NJ	12.1 NJ	140 J	258 JT
C415	LW2-C415-B	1.42 J	0.519	0.0565 UJ	1.94 JT
C415	LW2-C415-C	0.0478 U	0.0448 U	0.0552 UJ	0.0552 UJT
C415	LW2-C415-D	0.05 U	0.0469 U	0.0578 UJ	0.0578 UJT
C417	LW2-C417-B	4.18 NJ	5.29 NJ	1.49 J	11 JT
C417	LW2-C417-D	2.24 J	1.85 NJ	0.816 J	4.91 JT
C420	LW2-C420-B	2.45 NJ	1.99 J	0.358 J	4.8 JT
C420	LW2-C420-C	2.24 NJ	2.32 NJ	2.51 NJ	7.07 JT
C425-1	LW2-C425-B1	0.933 T	0.756 T	0.262 JT	1.95 JT
C425-1	LW2-C425-C1	2.22 JT	1.15 JT	0.428 JT	3.8 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	72-54-8 4,4'-DDD ug/kg	72-55-9 4,4'-DDE ug/kg	50-29-3 4,4'-DDT ug/kg	Total 4,4'-DDD, -DDE, -DDT ug/kg
Location	Sample ID				
C425-1	LW2-C425-E1	3.17 JT	1.11 NJT	0.558 JT	4.84 JT
C425-2	LW2-C425-B2	1.75 J	1.65 J	0.748 NJ	4.15 JT
C425-2	LW2-C425-C2	0.822 J	0.568 J	0.141 J	1.53 JT
C425-2	LW2-C425-D2	3.22 J	0.713 NJ	0.195 J	4.13 JT
C426	LW2-C426-B	1.91 NJ	2.8 NJ	0.339 J	5.05 JT
C426	LW2-C426-C	0.0521 U	0.0488 U	0.0602 UJ	0.0602 UJT
C430	LW2-C430-B	3.01 J	2.76 J	0.564 J	6.33 JT
C430	LW2-C430-C	5.65 J	5.18	0.845 J	11.7 JT
C430	LW2-C430-E	11.9 J	9.35	2.04 J	23.3 JT
C431	LW2-C431-B	9.1 J	8.69	1.98 J	19.8 JT
C431	LW2-C431-C	107 J	12	10.3 J	129 JT
C431	LW2-C431-D	4.68 NJ	0.946	5.1 J	10.7 JT
C434	LW2-C434-B	19.4 J	10.3	0.664 NJ	30.4 JT
C434	LW2-C434-C	0.0522 UJ	0.0489 UJ	0.0603 UJ	0.0603 UJT
C434	LW2-C434-D	0.0501 UJ	0.047 UJ	0.0579 UJ	0.0579 UJT
C437	LW2-C437-B	1.21 J	0.998	0.286 UJ	2.21 JT
C437	LW2-C437-C	0.276 J	0.0461 U	1.23 NJ	1.51 JT
C437	LW2-C437-D	0.053 U	0.0497 U	0.0613 UJ	0.0613 UJT
C439	LW2-C439-B	2.46	3.6	0.417 UJ	6.06 T
C439	LW2-C439-C	3.06 J	3.91 J	0.609 J	7.58 JT
C441-1	LW2-C441-B1	2.81	4.67	0.438 J	7.92 JT
C441-1	LW2-C441-C1	0.0518 U	0.0486 U	0.0599 UJ	0.0599 UJT
C441-2	LW2-C441-B2	6.38 JT	11 JT	0.908 JT	18.3 JT
C441-2	LW2-C441-C2	0.0566 UT	0.087 JT	0.0654 UJT	0.087 JT
C444	LW2-C444-B	2.31 J	13 J	0.788 J	16.1 JT
C444	LW2-C444-C	11 J	19.2 J	0.374 U	30.2 JT
C445	LW2-C445-B	2.08 NJ	3.86 NJ	0.355 NJ	6.3 JT
C445	LW2-C445-C	9.07 NJ	15.7 NJ	0.97 NJ	25.7 JT
C445	LW2-C445-E	10.1 NJ	22 NJ	0.984 NJ	33.1 JT
C450	LW2-C450-B	6.42 NJ	7.3 J	0.338 J	14.1 JT
C450	LW2-C450-C	26.4 NJ	65.3 J	1.17 NJ	92.9 JT
C453	LW2-C453-B	56.7 J	355 J	6.4 NJ	418 JT
C453	LW2-C453-C	87.1 J	233 J	1.45 J	322 JT
C453	LW2-C453-D	0.477 J	2.36 J	0.0724 U	2.84 JT
C454	LW2-C454-B	0.879 NJ	0.403 NJ	0.171 J	1.45 JT
C454	LW2-C454-C	0.0692 UJ	0.0649 UJ	0.224 NJ	0.224 JT
C454	LW2-C454-D	0.0618 U	0.167 NJ	0.45 J	0.617 JT
C454	LW2-C454-E	0.0508 U	0.122 NJ	0.315 J	0.437 JT
C455	LW2-C455-B	1290 J	2690 J	31.5 J	4010 JT
C455	LW2-C455-C	116 J	376 J	2.46 J	494 JT
C455	LW2-C455-D	0.496 NJ	1.98 NJ		2.48 JT
C456	LW2-C456-B	3.62 NJ	3.51 NJ	0.293 J	7.42 JT
C456	LW2-C456-C	9.86 NJ	8.96 NJ	0.998 J	19.8 JT
C456	LW2-C456-D	0.0644 U	0.253 NJ		0.253 JT
C456	LW2-C456-F	0.142 NJ	0.382 NJ	0.329 NJ	0.853 JT
C457	LW2-C457-B	3.24 J	3.36 J	0.532 NJ	7.13 JT
C457	LW2-C457-C	4.91 NJ	5.39 J	1.23 J	11.5 JT
C457	LW2-C457-E	0.0625 UJ	0.0586 UJ	0.37 NJ	0.37 JT
C458-1	LW2-C458-B	1.36 J	2.63 J	0.0917 UJ	3.99 JT
C458-1	LW2-C458-C	3.01 J	3.25 J	0.402 J	6.66 JT
C458-2	LW2-C458-B2	1.59 JT	2.66 JT	0.223 JT	4.47 JT

Table 4-6. 4,4-DDD, -DDE, and -DDT Concentrations Used in Total DDT Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	72-54-8 4,4'-DDD ug/kg	72-55-9 4,4'-DDE ug/kg	50-29-3 4,4'-DDT ug/kg	Total 4,4'-DDD, -DDE, -DDT ug/kg
Location	**Sample ID**				
C458-2	LW2-C458-C2	3.02 JT	3.1 JT	0.214 JT	6.33 JT
C461	LW2-C461-B	1.92 J	3.04 J	0.0902 UJ	4.96 JT
C461	LW2-C461-C	1.94 J	2.84 J	0.535 NJ	5.32 JT
C468	LW2-C468-B	2.07 J	1.96 NJ	0.333 J	4.36 JT
C468	LW2-C468-C	2.47 J	3.19 J	0.425 J	6.09 JT
C474	LW2-C474-B	1.45 J	1.81 J	0.346 J	3.61 JT
C474	LW2-C474-C	2.35 J	2.54 J	0.0786 UJ	4.89 JT
C477	LW2-C477-B	3.47 NJ	3.32 NJ	1.85 J	8.64 JT
C477	LW2-C477-C	2.44 NJ	1.08 NJ	1.32 J	4.84 JT
C494	LW2-C494-B	2.6 NJ	1.85 NJ	3.03 NJ	7.48 JT
C494	LW2-C494-C	3.26 NJ	1.93 NJ	3.99 NJ	9.18 JT
C494	LW2-C494-D	2.88 NJ	2.03 NJ	4.87 J	9.78 JT
C494	LW2-C494-E	0.299 U	0.617 NJ		0.617 JT

Notes:

J The associated numerical value is an estimated quantity.

N Presumptive evidence of presence of material.

T The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

U The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	CAS No / Chemical Name / Unit / Sample ID	5103-71-9 cis-Chlordane ug/kg	5103-74-2 trans-Chlordane ug/kg	27304-13-8 Oxychlordane ug/kg	5103-73-1 cis-Nonachlor ug/kg	39765-80-5 trans-Nonachlor ug/kg	Total Chlordanes ug/kg
Beach Sediment Samples							
B001	LW2-B001	0.0339 U	0.0214 U	0.0184 U	0.0425 U	0.037 U	0.0425 UT
B002	LW2-B002	0.0323 U	0.0204 U	0.0175 U	0.0404 U	0.0352 U	0.0404 UT
B003	LW2-B003	0.0355 U	0.0224 U	0.0192 U	0.0445 U	0.0387 U	0.0445 UT
B004	LW2-B004	0.0331 U	0.0209 U	0.0179 U	0.0414 U	0.0361 U	0.0414 UT
B005	LW2-B005	0.032 U	0.0202 U	0.0173 U	0.04 U	0.0349 U	0.04 UT
B006	LW2-B006	0.0309 U	0.0195 U	0.0167 U	0.0387 U	0.0337 U	0.0387 UT
B007	LW2-B007	0.035 U	0.0221 U	0.0189 U	0.0438 U	0.0381 U	0.0438 UT
B008	LW2-B008	0.0285 U	0.018 U	0.0155 U	0.0357 U	0.0311 U	0.0357 UT
B009	LW2-B009	0.03 U	0.0189 U	0.0162 U	0.0376 U	0.0327 U	0.0376 UT
B010	LW2-B010	0.381 J	0.299 J	0.0194 U	0.618 NJ	0.0391 U	1.3 JT
B011	LW2-B011	0.0283 U	0.0179 U	0.0153 U	0.0354 U	0.0308 U	0.0354 UT
B012	LW2-B012	0.0302 U	0.0191 U	0.0163 U	0.0378 U	0.0329 U	0.0378 UT
B015	LW2-B015	0.0281 U	0.0177 U	0.0152 U	0.0352 U	0.0306 U	0.0352 UT
B016	LW2-B016	0.03 U	0.019 U	0.0162 U	0.0376 U	0.0327 U	0.0376 UT
B017	LW2-B017	0.0314 UJ	0.044 NJ	0.017 UJ	0.0393 UJ	0.0342 UJ	0.044 JT
B018	LW2-B018	0.0296 UJ	0.206 NJ	0.016 UJ	0.0371 UJ	1.26 NJ	1.47 JT
B019	LW2-B019	0.0299 U	0.036 J	0.0162 U	0.0375 U	0.0326 U	0.036 JT
B020	LW2-B020	0.0332 U	0.021 U	0.018 U	0.158 NJ	0.0362 U	0.158 JT
B021	LW2-B021	0.0281 U	0.0177 U	0.0152 U	0.0351 U	0.0306 U	0.0351 UT
B022-1	LW2-B022-1	0.336 J	0.317 NJ	0.0187 U	0.649 NJ	0.0377 U	1.3 JT
B022-2	LW2-B022-2	0.0355 U	0.215 NJ	0.0192 U	0.0444 U	0.0387 U	0.215 JT
B023	LW2-B023	0.085 NJ	0.044 J	0.0158 U	0.0365 U	0.085 J	0.214 JT
B024	LW2-B024	1.85	3.09	0.0182 U	0.448 J	0.943 J	6.33 JT
B025-1	LW2-B025-1	0.0305 UT	0.0189 UT	0.0162 UT	0.0375 UT	0.0327 UT	0.0375 UT
B025-2	LW2-B025-2	0.194	0.0192 U	0.0165 U	0.0381 U	0.0332 U	0.194 T
B026	LW2-B026	0.567	0.654 NJ	0.0219 U	0.445 NJ	0.345 U	1.67 JT
B050	LW2-B050	0.146 U	0.0923 U	0.0791 U	0.615 J	3.3 NJ	3.92 JT
Surface Interval Sediment Samples							
C093	LW2-C093-A	0.544 U	0.344 U	0.295 U	3.98 J	0.594 U	3.98 JT
D1-1	LW2-D1-1	0.179 UT	0.234 UT	0.0307 UT	0.071 UJT	0.212 JT	0.212 JT
D1-2	LW2-D1-2	0.235 U	0.348 U	0.0332 U	0.0768 UJ	0.156 J	0.156 JT
D2	LW2-D2	0.0424 U	0.232 U	0.023 U	0.0531 UJ	0.053 J	0.053 JT
G001	LW2-G001	0.207 NJ	0.057 NJ	0.03 U	0.196 NJ	0.0605 U	0.46 JT
G002	LW2-G002	0.373 NJ	0.244 J	0.0333 U	0.0771 U	0.149 J	0.766 JT
G003	LW2-G003	0.198 J	0.0384 UJ	0.0329 UJ	0.0761 UJ	0.0663 UJ	0.198 JT
G004	LW2-G004	0.0517 U	0.087 NJ	0.028 U	0.0647 U	0.215 J	0.302 JT
G005	LW2-G005	0.0673 UJ	0.122 NJ	0.193 NJ	0.156 J	0.156 J	0.627 JT
G006	LW2-G006	0.0675 UJ	0.0427 UJ	0.0366 UJ	0.187 NJ	0.0736 UJ	0.187 JT
G007-1	LW2-G007-1	0.36 JT	0.0344 UJT	0.0295 UJT	0.0694 UJT	0.0594 UJT	0.36 JT
G007-2	LW2-G007-2	0.306 NJ	0.114 NJ	0.0321 UJ	0.268 J	0.157 J	0.845 JT
G008	LW2-G008	0.0672 UJ	0.0425 UJ	0.0364 UJ	0.0842 UJ	0.0733 UJ	0.0842 UJT
G009	LW2-G009	0.0382 U	0.0241 U	0.0207 U	1.41 J	0.0417 U	1.41 JT
G010	LW2-G010	0.0624 U	0.216 NJ	0.0338 UJ	0.312 NJ	0.068 U	0.528 JT
G011	LW2-G011	0.54 NJ	0.0283 U	0.0243 UJ	1.18 NJ	0.0489 U	1.72 JT
G012	LW2-G012	0.188 J	0.163 NJ	0.0296 UJ	0.172 NJ	0.0595 U	0.523 JT
G013	LW2-G013	0.0633 UJ	0.04 UJ	0.0343 UJ	0.0792 U	0.069 U	0.0792 UT
G014	LW2-G014	0.241 J	0.097 NJ	0.036 UJ	0.122 J	0.393 NJ	0.853 JT
G015	LW2-G015	0.0462 U	0.0292 U	0.025 U	1.22 NJ	0.0503 U	1.22 JT
G016	LW2-G016	0.215	0.723 NJ	0.0359 U	0.083 U	0.0723 U	0.938 JT
G017	LW2-G017	0.0554 U	0.035 U	0.03 U	2.15 NJ	0.0604 U	2.15 JT
G018	LW2-G018	0.372	0.689 J	0.0342 U	0.453 J	0.273 J	1.79 JT
G019	LW2-G019	0.0318 U	0.0201 U	0.0172 U	1.29 NJ	0.0347 U	1.29 JT
G020	LW2-G020	0.0576 U	0.0364 U	0.0312 U	2.17 NJ	0.0628 U	2.17 JT
G021	LW2-G021	0.0638 U	0.0403 U	0.0346 U	0.297 J	0.287	0.584 JT
G022	LW2-G022	0.0631 U	0.287 NJ	0.0342 U	0.344 NJ	0.303 J	0.934 JT
G023-1	LW2-G023-1	0.088 JT	0.0232 UJT	0.0199 UJT	0.0461 UJT	0.493 JT	0.581 JT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	5103-71-9 cis-Chlordane ug/kg	5103-74-2 trans-Chlordane ug/kg	27304-13-8 Oxychlordane ug/kg	5103-73-1 cis-Nonachlor ug/kg	39765-80-5 trans-Nonachlor ug/kg	Total Chlordanes ug/kg
	CAS No / Chemical Name / Unit						
G023-2	LW2-G023-2	0.042 U	0.0266 UJ	0.0228 UJ	0.0526 UJ	0.0458 U	0.0526 UJT
G024	LW2-G024	0.177 J	0.152 NJ	0.0327 U	0.368 NJ	0.0658 U	0.697 JT
G025	LW2-G025	0.0327 U	0.0207 U	0.0177 U	0.95 NJ	0.0357 U	0.95 JT
G026	LW2-G026	0.0605 U	0.0382 U	0.0327 U	0.0757 U	0.233 NJ	0.233 JT
G027	LW2-G027	0.083 J	0.046 NJ	0.0188 U	0.161 J	0.0379 U	0.29 JT
G028	LW2-G028	0.579 J	0.706 J	0.028 U	0.584 J	0.796 J	2.67 JT
G029	LW2-G029	0.0461 U	0.433 NJ	0.0249 U	0.676 NJ	0.0502 U	1.11 JT
G030	LW2-G030	0.425 NJ	1.02 J	0.0348 U	0.516 NJ	0.0701 U	1.96 JT
G031	LW2-G031	0.208 J	0.08 J	0.0275 U	0.0635 U	0.182 J	0.47 JT
G032	LW2-G032	0.379 J	0.949 NJ	0.037 U	0.824 NJ	0.306 NJ	2.46 JT
G033	LW2-G033	0.083 J	0.045 NJ	0.0234 U	0.054 U	0.047 U	0.128 JT
G034	LW2-G034	0.372	0.339 NJ	0.0181 U	0.447 NJ	0.279	1.44 JT
G035	LW2-G035	0.227	0.26 NJ	0.0281 U	0.516 NJ	0.085 NJ	1.09 JT
G036	LW2-G036	0.065 U	0.312 NJ	0.0352 U	0.455 NJ	0.549 J	1.32 JT
G037	LW2-G037	0.0346 U	0.671 NJ	0.0187 U	0.451 NJ	0.0377 U	1.12 JT
G038	LW2-G038	0.199 U	0.126 U	0.108 U	0.25 U	0.217 U	0.25 UT
G039	LW2-G039	0.0607 U	0.95 J	0.0328 U	0.463 NJ	0.24 J	1.65 JT
G040	LW2-G040	0.0326 U	0.0206 U	0.0176 U	0.151 NJ	0.0355 U	0.151 JT
G041	LW2-G041	0.0451 U	0.106 NJ	0.0244 U	0.585 NJ	0.0491 U	0.691 JT
G042	LW2-G042	0.464 NJ	0.302 J	0.0302 U	0.388 J	0.227 J	1.38 JT
G043	LW2-G043	0.201 J	0.568 J	0.0331 U	0.0765 U	0.494 J	1.26 JT
G044-1	LW2-G044-1	0.217 T	0.202 JT	0.0323 UT	0.26 JT	0.263 T	0.942 JT
G044-2	LW2-G044-2	0.0619 U	0.0391 U	0.0335 U	0.0775 U	0.0675 U	0.0775 UT
G045	LW2-G045	0.0343 U	0.0217 U	0.0186 U	0.043 U	0.0374 U	0.043 UT
G046	LW2-G046	0.162 J	0.185 J	0.0345 U	0.0797 U	0.157 J	0.504 JT
G047	LW2-G047	0.0347 U	0.0219 U	0.0188 U	0.0435 U	0.0379 U	0.0435 UT
G048	LW2-G048	0.0343 U	0.0217 U	0.0186 U	0.0429 U	0.0374 U	0.0429 UT
G049	LW2-G049	0.0345 U	0.0218 U	0.0187 U	0.0432 U	0.0376 U	0.0432 UT
G050	LW2-G050	0.32 J	0.243 J	0.0246 U	0.0569 U	0.326 J	0.889 JT
G051	LW2-G051	0.187 NJ	0.0356 U	0.0305 U	0.145 J	0.0614 U	0.332 JT
G052	LW2-G052	0.0331 U	0.0209 U	0.0179 U	0.0415 U	0.0361 U	0.0415 UT
G053	LW2-G053	0.0335 U	0.0212 U	0.0181 U	0.0419 U	0.0365 U	0.0419 UT
G054	LW2-G054	0.0357 UJ	0.0225 U	0.057 J	0.0446 UJ	0.0389 U	0.057 JT
G055	LW2-G055	0.138 J	0.0304 U	0.0261 U	0.0603 U	0.0525 U	0.138 JT
G056	LW2-G056	0.103 NJ	0.0239 U	0.952 NJ	0.0474 U	0.0413 U	1.06 JT
G057	LW2-G057	0.123 J	0.363 J	0.0247 U	0.0571 U	0.199 J	0.685 JT
G058	LW2-G058	0.15 J	0.0252 U	0.0216 U	0.147 J	0.0435 U	0.297 JT
G059	LW2-G059	0.033 U	0.059 J	0.0179 U	0.0414 U	0.038 NJ	0.097 JT
G060	LW2-G060	0.0351 U	0.0221 U	0.019 U	0.255 NJ	0.0382 U	0.255 JT
G062	LW2-G062	0.195 NJ	0.159	0.0185 U	0.0427 U	0.0372 U	0.354 JT
G063	LW2-G063	0.118 J	0.0365 U	0.0313 U	0.0724 U	0.184 J	0.302 JT
G064	LW2-G064	0.136 J	0.183 J	0.0206 U	0.0476 U	0.0414 U	0.319 JT
G065	LW2-G065	0.133	0.035 J	0.0248 U	0.0573 U	0.208 J	0.376 JT
G066	LW2-G066	0.371	0.595 J	0.0253 U	0.352 NJ	0.0509 U	1.32 JT
G067	LW2-G067	0.281 J	0.345 J	0.0244 U	0.678 NJ	0.291	1.6 JT
G068	LW2-G068	0.157 J	0.049 J	0.0299 U	0.216 J	0.399 J	0.821 JT
G069	LW2-G069	0.0469 U	0.0296 U	0.0254 U	0.0587 UJ	0.0511 U	0.0587 UJT
G070	LW2-G070	0.371 NJ	0.132 NJ	0.0325 U	0.0751 U	0.0654 U	0.503 JT
G071	LW2-G071	0.32	0.279 J	0.0199 U	0.163 J	0.28 J	1.04 JT
G072	LW2-G072	0.0571 U	0.263 NJ	0.0309 U	0.56 J	0.4 NJ	1.22 JT
G073	LW2-G073	0.0345 U	0.048 NJ	0.127 NJ	0.0432 U	0.0376 U	0.175 JT
G074	LW2-G074	0.0337 U	0.061 J	0.0183 U	0.1 NJ	0.0368 U	0.161 JT
G075-1	LW2-G075-1	0.0389 U	0.125 J	0.0211 U	0.168 J	0.108	0.401 JT
G075-2	LW2-G075-2	0.12 J	0.031 J	0.0226 U	0.0523 U	0.068 J	0.219 JT
G076	LW2-G076	0.057 U	0.286 NJ	0.0308 U	0.866 NJ	0.0621 U	1.15 JT
G077	LW2-G077	0.702 J	0.53 J	0.029 UJ	0.288 J	1.01 J	2.53 JT
G078	LW2-G078	0.0325 U	0.0205 U	0.0176 U	0.0407 U	0.0354 U	0.0407 UT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No / Chemical Name / Unit	5103-71-9 cis-Chlordane ug/kg	5103-74-2 trans-Chlordane ug/kg	27304-13-8 Oxychlordane ug/kg	5103-73-1 cis-Nonachlor ug/kg	39765-80-5 trans-Nonachlor ug/kg	Total Chlordanes ug/kg
Location	**Sample ID**						
G079	LW2-G079	0.0366 U	0.0231 U	0.111 NJ	0.0459 U	0.0399 U	0.111 JT
G080	LW2-G080	0.0333 U	0.021 U	0.018 U	0.0417 U	0.0363 U	0.0417 UT
G081	LW2-G081	0.0565 U	0.0357 U	0.0306 U	0.0708 U	0.0616 U	0.0708 UT
G082	LW2-G082	0.049 J	0.098 J	0.0179 U	0.0414 U	0.13	0.277 JT
G083	LW2-G083	0.135 J	0.108 NJ	0.622 NJ	0.155 J	0.0467 U	1.02 JT
G085	LW2-G085	1.02 NJ	0.625 NJ	0.0256 U	1.27 J	0.0515 U	2.92 JT
G086	LW2-G086	0.248 J	0.196 J	0.0241 U	0.245 J	0.076 J	0.765 JT
G088	LW2-G088	0.224 J	0.172 J	0.026 U	0.169	0.072 J	0.637 JT
G089	LW2-G089	0.0341 U	0.059 NJ	0.0184 U	0.214 NJ		0.273 JT
G090	LW2-G090	0.181 J	0.157 J	0.0266 U	0.147 J	0.275 J	0.76 JT
G091	LW2-G091	0.245 J	0.245 J	0.0271 U	0.228 J	0.055 J	0.773 JT
G092	LW2-G092	0.0767 U	0.33 NJ	0.0415 U	2.26 J	0.0836 U	2.59 JT
G093	LW2-G093	3.13 NJ	0.508 NJ	0.0295 U	1.42 J	2.41 NJ	7.47 JT
G094	LW2-G094	0.792 J	1.12 NJ	8.85 J	0.581 U	0.506 U	10.8 JT
G095	LW2-G095	0.224 J	0.414 J	0.019 U	0.044 U	0.219 J	0.857 JT
G096	LW2-G096	0.441	0.272 J	0.0233 U	0.348 J	0.369 J	1.43 JT
G097	LW2-G097	0.05 U	0.268 NJ	0.0271 U	0.0627 U	0.178 NJ	0.446 JT
G098	LW2-G098	0.146 J	0.057 NJ	0.262 NJ	0.0614 U	0.0535 U	0.465 JT
G099	LW2-G099	0.249	0.207 J	1.03	0.211 J	0.0379 U	1.7 JT
G100	LW2-G100	0.0395 U	0.135	0.0214 U	0.782 NJ	0.0431 U	0.917 JT
G101	LW2-G101	0.0539 U	0.099 NJ	0.0292 U	0.585 NJ	0.0588 U	0.684 JT
G102	LW2-G102	0.052 J	0.0207 U	0.665 J	0.523 NJ	0.0357 U	1.24 JT
G103	LW2-G103	0.468	0.458 J	0.0261 U	0.197	0.447 J	1.57 JT
G104	LW2-G104	0.226 J	0.201 NJ	0.0261 U	0.319 NJ	0.287 J	1.03 JT
G105	LW2-G105	0.701 J	0.654 J	0.0251 U	0.588 J	0.751 J	2.69 JT
G106	LW2-G106	0.263	0.295 J	0.0233 U	0.147 J	0.328 J	1.03 JT
G107	LW2-G107	0.314	0.391 J	0.0236 U	0.654 NJ	0.0474 U	1.36 JT
G108	LW2-G108	0.462	0.37 J	0.0286 U	0.138 J	0.345 J	1.32 JT
G109	LW2-G109	0.23 J	0.082 J	0.0249 UJ	0.125 J	0.346 J	0.783 JT
G110	LW2-G110	0.408 NJ	0.069 NJ	0.0312 U	0.453 NJ	0.0628 U	0.93 JT
G111	LW2-G111	0.315 J	0.379 J	0.0248 U	0.245 NJ	0.05 U	0.939 JT
G112	LW2-G112	0.194 J	0.321 J	0.0269 U	0.0622 U	0.185 J	0.7 JT
G113	LW2-G113	0.206 J	0.075 NJ	0.0331 UJ	0.198 J	0.352	0.831 JT
G116	LW2-G116	0.334 J	0.109 J	0.0308 U	0.0712 U	0.454 J	0.897 JT
G117	LW2-G117	0.239 J	0.16 J	0.0248 U	0.469 J	0.102 J	0.97 JT
G119	LW2-G119	0.0383 UJ	0.0242 U	0.0207 U	0.0479 U	0.0417 U	0.0479 UT
G120	LW2-G120	0.255 J	0.105 J	0.0329 U	0.076 U	0.516 J	0.876 JT
G121	LW2-G121	0.0533 U	0.138 J	0.0289 U	0.0668 U	1.89 J	2.03 JT
G122	LW2-G122	0.486 J	0.55 J	0.0298 U	0.687 J	0.549 J	2.27 JT
G123	LW2-G123	0.0457 U	0.0289 U	0.0247 U	0.0572 U	0.0498 U	0.0572 UT
G124	LW2-G124	0.18 U	0.113 U	0.0973 U	0.225 U	0.196 U	0.225 UT
G125	LW2-G125	0.21 J	0.222 J	0.0324 UJ	0.0749 UJ	0.131 J	0.563 JT
G126	LW2-G126	0.035 U	0.0221 U	0.0189 U	0.0438 U	0.0382 U	0.0438 UT
G127	LW2-G127	0.346 J	0.198 J	0.0264 UJ	0.387 J	0.0531 UJ	0.931 JT
G128	LW2-G128	0.0454 U	0.032 J	0.0246 U	0.0568 U	0.113 J	0.145 JT
G129	LW2-G129	0.386 J	0.183 UJ	0.157 UJ	0.363 UJ	0.316 UJ	0.386 JT
G130	LW2-G130	0.443 J	0.293 J	0.0204 U	0.0473 U	0.583 J	1.32 JT
G131	LW2-G131	0.0623 U	0.452 J	0.0337 U	0.0779 UJ	0.241	0.693 JT
G132	LW2-G132	0.56 J	0.261 J	0.119 UJ	0.276 UJ	0.24 UJ	0.821 JT
G133	LW2-G133	0.374 J	0.131 J	0.0306 UJ	0.0707 UJ	0.472 J	0.977 JT
G134	LW2-G134	0.39 NJ	0.274 J	0.0358 U	0.612 NJ	0.309 J	1.59 JT
G136	LW2-G136	0.278 J	0.0404 UJ	0.0346 UJ	0.966 J	0.302 J	1.55 JT
G137	LW2-G137	0.198 J	0.312 J	0.0342 U	0.444 NJ	0.256 J	1.21 JT
G139	LW2-G139	0.462 J	0.0298 UJ	0.0256 UJ	1.31 J	0.0515 UJ	1.77 JT
G140-1	LW2-G140-1	0.0386 UJT	0.163 JT	0.0209 UJT	0.531 JT	1.29 JT	1.98 JT
G140-1	LW2-G140-2	0.19 J	0.0213 U	0.0183 U	0.272 J	0.14	0.602 JT
G141	LW2-G141	0.11 J	0.254 NJ	0.0256 U	0.0592 U	0.112 J	0.476 JT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	5103-71-9	5103-74-2	27304-13-8	5103-73-1	39765-80-5	Total
	Chemical Name	cis-Chlordane	trans-Chlordane	Oxychlordane	cis-Nonachlor	trans-Nonachlor	Chlordanes
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**						
G142	LW2-G142	0.249	0.0259 U	1.03 J	0.382 J	0.267 J	1.93 JT
G143	LW2-G143	0.23 J	0.137 NJ	0.0254 U	0.0588 U	0.324 J	0.691 JT
G146	LW2-G146	0.166 UJ	0.105 UJ	0.195 J	0.208 UJ	0.181 UJ	0.195 JT
G147	LW2-G147	0.364 J	0.0226 U	0.0194 U	0.89 J	0.367 J	1.62 JT
G149	LW2-G149	0.43 J	0.336 J	0.0232 U	0.29 NJ	0.23 J	1.29 JT
G150	LW2-G150	0.0562 U	0.0355 U	0.0304 U	0.367 J	0.678 J	1.05 JT
G153	LW2-G153	0.0543 U	0.0343 U	0.0294 U	0.33 J	0.395 J	0.725 JT
G154	LW2-G154	0.136 J	0.137 J	0.0302 U	0.0699 U	0.0609 U	0.273 JT
G155	LW2-G155	0.24 U	0.151 U	0.13 U	0.3 U	0.261 U	0.3 UT
G157	LW2-G157	0.183 U	0.116 U	0.099 U	0.229 U	0.199 U	0.229 UT
G159	LW2-G159	0.119 NJ	0.044 NJ	0.018 U	0.0417 U	0.0363 U	0.163 JT
G160	LW2-G160	0.361 U	0.228 U	0.196 U	0.452 U	0.394 U	0.452 UT
G161	LW2-G161	0.343 U	0.217 U	0.186 U	0.43 U	0.374 U	0.43 UT
G163	LW2-G163	0.0331 U	0.0209 U	0.0179 U	0.0415 U	0.0361 U	0.0415 UT
G164	LW2-G164	0.254 J	0.192 J	0.082 J	0.0407 UJ	0.264 J	0.792 JT
G165	LW2-G165	0.281	0.257 J	0.286 J	0.295 J	0.387 J	1.51 JT
G166	LW2-G166	0.042 J	0.0239 U	0.0205 U	0.0474 U	0.0413 U	0.042 JT
G168	LW2-G168	0.711 NJ	0.131 UJ	0.113 UJ	0.44 J	0.625 J	1.78 JT
G170	LW2-G170	0.122 J	0.086 J	0.0217 U	0.395 J	0.132 J	0.735 JT
G172	LW2-G172	0.398 J	0.0375 U	0.0321 U	0.0742 U	0.0647 U	0.398 JT
G175	LW2-G175	0.335	0.253 J	0.651 J	0.252 J	0.412 J	1.9 JT
G176	LW2-G176	0.15	0.336 J	0.0178 U	0.0412 U	0.157 J	0.643 JT
G178	LW2-G178	0.099 J	0.0232 UJ	0.0199 UJ	1.29 J	0.268 J	1.66 JT
G179	LW2-G179	7.96 J	0.0243 UJ	0.0208 UJ	0.863 J	0.042 U	8.82 JT
G180	LW2-G180	0.0336 U	0.0212 UJ	0.0182 UJ	0.52 J	0.414 J	0.934 JT
G181	LW2-G181	0.0551 U	0.0348 U	0.914 J	0.069 U	0.201 J	1.12 JT
G182	LW2-G182	0.169 J	0.026 J	0.0182 UJ	0.042 UJ	0.219 J	0.414 JT
G183	LW2-G183	0.0337 U	0.0213 U	0.0182 U	0.0422 U	0.0367 U	0.0422 UT
G184	LW2-G184	0.0362 U	0.0229 U	0.0196 U	0.0453 U	0.196 J	0.196 JT
G186	LW2-G186	0.0341 U	0.0216 U	0.0185 U	0.0427 U	0.0372 U	0.0427 UT
G187	LW2-G187	0.0389 U	0.0246 U	0.0211 U	0.0487 U	0.0424 U	0.0487 UT
G188	LW2-G188	0.0553 U	0.137 J	0.0299 U	0.0693 U	0.58 J	0.717 JT
G189	LW2-G189	0.0507 UJ	0.032 UJ	0.0274 UJ	0.0634 UJ	0.327 J	0.327 JT
G190	LW2-G190	0.236 U	0.149 U	0.677 J	0.296 U	0.258 U	0.677 JT
G191	LW2-G191	0.0327 U	0.0207 U	0.0177 U	0.0409 U	0.0357 U	0.0409 UT
G192	LW2-G192	0.333 J	0.187 NJ	0.0239 U	0.694 NJ	0.0481 U	1.21 JT
G193	LW2-G193	0.192 UJ	0.121 UJ	1.35 NJ	0.403 J	0.209 UJ	1.75 JT
G194	LW2-G194	0.0344 U	0.0217 U	0.0186 U	0.0431 U	0.0375 U	0.0431 UT
G195	LW2-G195	0.399	0.137 J	1.34 J	0.0633 U	0.726 J	2.6 JT
G197-1	LW2-G197-1	0.784 J	0.292 J	1.86 J	0.049 U	0.086 J	3.02 JT
G197-2	LW2-G197-2	0.0436 U	0.0275 U	1.67 J	0.0546 U	0.0475 U	1.67 JT
G198	LW2-G198	0.0437 U	0.0276 U	2.75 J	0.0547 U	0.0477 U	2.75 JT
G199	LW2-G199	0.321 NJ	0.139 U	3.26 J	0.276 UJ	0.241 U	3.58 JT
G200	LW2-G200	0.579 NJ	0.219 NJ	0.0238 U	0.0551 U	0.626 NJ	1.42 JT
G202	LW2-G202	0.241 U	0.152 U	0.131 U	1.05 J	0.263 U	1.05 JT
G203-1	LW2-G203-1	0.0504 UJT	0.285 JT	0.0273 UJT	0.562 JT	0.0549 UJT	0.847 JT
G203-2	LW2-G203-2	0.0462 U	0.226 NJ	0.025 U	0.403 NJ	0.0503 U	0.629 JT
G204	LW2-G204	0.188 NJ	0.0263 U	0.0225 U	0.312 NJ	0.0453 U	0.5 JT
G205	LW2-G205	0.0351 UJ	0.0222 UJ	0.019 U	0.0439 UJ	0.453 NJ	0.453 JT
G206	LW2-G206	0.275 J	0.621 J	0.127 U	0.295 U	0.257 UJ	0.896 JT
G207	LW2-G207	1.03 J	0.153 U	2.63 J	0.663 NJ	0.264 U	4.32 JT
G208	LW2-G208	0.183 UJ	0.116 UJ	0.235 J	0.229 UJ	0.2 UJ	0.235 JT
G209	LW2-G209	0.198 U	0.125 U	4.19 J	0.248 U	0.606 J	4.8 JT
G210	LW2-G210	0.505 U	0.319 U	0.273 U	0.632 U	0.55 U	0.632 UT
G212-1	LW2-G212-1	0.0418 U	0.0264 U	0.0226 U	0.0523 U	0.0455 U	0.0523 UT
G212-2	LW2-G212-2	0.135 NJ	0.0261 U	0.0224 U	0.165 NJ	0.119 J	0.419 JT
G213	LW2-G213	0.238 U	0.15 U	0.129 U	0.298 U	0.259 U	0.298 UT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	5103-71-9 cis-Chlordane ug/kg	5103-74-2 trans-Chlordane ug/kg	27304-13-8 Oxychlordane ug/kg	5103-73-1 cis-Nonachlor ug/kg	39765-80-5 trans-Nonachlor ug/kg	Total Chlordanes ug/kg
Location	**Sample ID**						
G214-1	LW2-G214-1	0.43 NJ	0.199 J	0.0278 U	0.0643 UJ	0.252	0.881 JT
G215	LW2-G215	1.03 J	0.285 J	0.0234 UJ	0.733 J	0.0472 UJ	2.05 JT
G216	LW2-G216	0.0323 U	0.0204 U	0.0175 U	0.0405 U	0.0352 U	0.0405 UT
G217	LW2-G217	0.0325 U	0.0205 U	0.0176 U	0.0406 U	0.117 NJ	0.117 JT
G218	LW2-G218	0.114	0.118 J	0.0189 U	0.157 J	0.038 U	0.389 JT
G220	LW2-G220	0.0419 UJ	0.0265 UJ	0.0227 UJ	0.0525 UJ	0.0457 UJ	0.0525 UJT
G221	LW2-G221	0.0371 UJ	0.0235 UJ	0.0201 UJ	0.0465 UJ	0.0405 UJ	0.0465 UJT
G222	LW2-G222	0.214 U	0.135 U	0.116 U	0.267 U	0.773 J	0.773 JT
G224	LW2-G224	0.215 UJ	0.136 UJ	0.215 J	0.27 UJ	0.235 UJ	0.215 JT
G225	LW2-G225	0.17 UJ	0.108 UJ	0.0921 UJ	0.213 UJ	0.186 UJ	0.213 UJT
G226	LW2-G226	0.38	0.341 J	0.0269 U	0.846 J	0.0542 U	1.57 JT
G227	LW2-G227	0.09 J	0.0216 U	0.0185 U	0.182 J	0.067 J	0.339 JT
G228	LW2-G228	0.531 J	0.522 J	0.0284 U	1.03 J	0.502	2.59 JT
G229	LW2-G229	0.238 UJ	0.15 UJ	0.129 UJ	0.297 UJ	0.259 UJ	0.297 UJT
G230	LW2-G230	0.746 J	0.444	0.0265 U	1.47 J	0.0533 U	2.66 JT
G231	LW2-G231	0.19 U	0.12 U	0.103 U	0.238 UJ	0.207 U	0.238 UJT
G232	LW2-G232	1.32 J	1.35 J	0.126 U	0.646 NJ	1.59 J	4.91 JT
G233	LW2-G233	0.351 J	0.845 NJ	0.112 U	0.26 U	0.483 J	1.68 JT
G234	LW2-G234	0.16 U	0.101 U	0.0867 U	0.2 UJ	0.175 U	0.2 UJT
G235	LW2-G235	0.0297 U	0.0188 UJ	0.0161 UJ	0.0372 UJ	0.43 J	0.43 JT
G236	LW2-G236	0.909 J	0.67	0.0228 U	0.0527 U	0.892 J	2.47 JT
G237	LW2-G237	0.282 U	0.178 U	0.153 U	2.24 J	0.308 U	2.24 JT
G238	LW2-G238	0.865 J	0.667 J	0.029 U	0.0671 U	0.0584 U	1.53 JT
G239	LW2-G239	0.348 J	0.517	0.0252 U	0.901 J	0.0508 U	1.77 JT
G240	LW2-G240	0.0497 U	0.0314 U	0.0269 U	1.44 J	1.16 J	2.6 JT
G241	LW2-G241	6.79 J	0.0276 U	1.25 J	4.91 J	1.03 J	14 JT
G242	LW2-G242	0.0482 U	0.0304 U	0.0261 U	0.0603 U	1.05 J	1.05 JT
G243	LW2-G243	0.183 J	0.043 J	0.0262 U	0.0606 U	0.0527 U	0.226 JT
G244	LW2-G244	0.481 J	0.303 NJ	0.11 U	0.255 U	0.222 U	0.784 JT
G245	LW2-G245	0.746 J	0.0317 U	0.0272 U	0.916 J	0.744 J	2.41 JT
G246	LW2-G246	0.408 J	0.039 J	0.031 UJ	0.567 J	0.709 J	1.72 JT
G247	LW2-G247	0.484 J	0.4 NJ	1.24 NJ	0.259 U	0.494 J	2.62 JT
G248	LW2-G248	0.0326 U	0.0206 U	0.0177 U	0.0409 U	0.0356 U	0.0409 UT
G249	LW2-G249	0.185 U	0.117 U	0.1 U	1.02 NJ	0.202 U	1.02 JT
G250-1	LW2-G250	0.185 NJ	0.022 UJ	0.0189 U	0.0437 UJ	0.974 NJ	1.16 JT
G251-1	LW2-G251-1	1.01 J	0.0328 U	0.0281 U	1.11 J	1.01 J	3.13 JT
G251-1	LW2-G251-2	0.0544 U	0.0344 U	0.0295 U	1.57 J	1.32 J	2.89 JT
G252	LW2-G252	0.172 J	0.0229 U	0.0196 U	0.37 J	0.0395 U	0.542 JT
G253	LW2-G253	0.165 UJ	0.104 U	0.0894 U	1.32 NJ	0.18 U	1.32 JT
G254	LW2-G254	0.404 U	0.976 NJ	0.219 U	0.506 U	0.44 U	0.976 JT
G255	LW2-G255	0.208 U	0.131 U	0.113 U	0.26 U	0.227 U	0.26 UT
G257	LW2-G257	0.0379 U	0.024 U	0.0205 U	0.0475 U	0.0414 U	0.0475 UT
G258	LW2-G258	0.0327 U	0.0206 U	0.0177 U	1.44 J	0.0356 U	1.44 JT
G259	LW2-G259	1.63 J	0.0316 UJ	0.0271 UJ	6.6 J	0.0545 UJ	8.23 JT
G260	LW2-G260	0.0326 UJ	0.0206 UJ	0.0176 U	0.0408 UJ	0.412 J	0.412 JT
G261	LW2-G261	0.0323 U	0.0204 U	0.0175 U	0.0404 U	0.0352 U	0.0404 UT
G263	LW2-G263	0.209 U	0.132 U	0.113 U	0.262 U	0.228 U	0.262 UT
G264	LW2-G264	2.08 NJ	0.194 UJ	0.166 UJ	0.384 UJ	0.334 UJ	2.08 JT
G266	LW2-G266	0.096 J	0.174 NJ	0.0233 U	0.0539 U	0.157 J	0.427 JT
G267	LW2-G267	0.165 J	0.308 J	0.0283 U	0.0655 U	0.44 NJ	0.913 JT
G268	LW2-G268	0.594	0.846 NJ	0.0282 U	0.674 NJ	0.497 J	2.61 JT
G269	LW2-G269	7.43 NJ	0.182 UJ	0.156 UJ	3.65 NJ	0.314 UJ	11.1 JT
G270-1	LW2-G270-1	2.41 J	0.0362 U	0.031 UJ	2.24 J	0.0625 U	4.65 JT
G270-2	LW2-G270-2	0.0615 U	0.0389 U	0.0333 UJ	2.73 NJ	0.0671 U	2.73 JT
G271	LW2-G271	0.0314 U	0.0198 U	0.017 U	0.0393 U	0.0342 U	0.0393 UT
G272	LW2-G272	0.04 U	0.0253 U	3.69 J	0.0501 U	0.0436 U	3.69 JT
G273	LW2-G273	1.88 NJ	0.146 UJ	0.125 U	0.29 UJ	3.49 NJ	5.37 JT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	5103-71-9	5103-74-2	27304-13-8	5103-73-1	39765-80-5	Total
	Chemical Name	cis-Chlordane	trans-Chlordane	Oxychlordane	cis-Nonachlor	trans-Nonachlor	Chlordanes
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**						
G274	LW2-G274	0.356 U	0.225 UJ	0.193 U	11.4 NJ	9.23 NJ	20.6 JT
G276	LW2-G276	1.58 NJ	0.204 U	0.175 U	0.405 U	0.353 U	1.58 JT
G277	LW2-G277	0.121 J	0.368 NJ	0.0282 U	0.296 NJ	0.208	0.993 JT
G278	LW2-G278	3.97 NJ	0.205 U	0.176 U	0.406 U	0.354 U	3.97 JT
G280	LW2-G280	0.253 J	0.426 J	0.0316 U	0.268 NJ	0.262 J	1.21 JT
G282	LW2-G282	0.33 UJ	0.679 NJ	0.178 U	0.413 U	0.359 U	0.679 JT
G283	LW2-G283	5.58 NJ	0.16 UJ	0.137 UJ	0.318 UJ	0.277 UJ	5.58 JT
G284	LW2-G284	1.32 NJ	0.205 U	0.176 U	0.407 U	0.354 U	1.32 JT
G285	LW2-G285	0.0329 U	0.0208 U	0.0178 U	0.0411 U	0.0358 U	0.0411 UT
G288	LW2-G288	6.94 J	0.157 U	0.134 U	0.31 U	0.27 U	6.94 JT
G292	LW2-G292	2.45 NJ	0.316 U	0.271 U	0.626 U	0.545 U	2.45 JT
G293	LW2-G293	0.145 J	0.184 J	0.0285 U	0.0659 U	0.313 NJ	0.642 JT
G294-1	LW2-G294-1	0.0571 UJ	0.0361 UJ	0.0309 UJ	0.0715 UJ	0.0623 UJ	0.0715 UJT
G294-2	LW2-G294-2	0.0592 UJT	0.0349 UJT	0.0299 UJT	0.0692 UJT	0.0602 UJT	0.0692 UJT
G295	LW2-G295	0.165 J	0.221 NJ	0.0296 U	0.0685 U	0.321 NJ	0.707 JT
G296	LW2-G296	0.622 J	0.755 NJ	0.0283 U	0.258 J	0.711 J	2.35 JT
G298	LW2-G298	0.486 U	0.307 U	0.263 U	0.608 U	0.529 U	0.608 UT
G301	LW2-G301	1.31 NJ	0.304 U	0.26 U	0.602 U	2.38 J	3.69 JT
G302	LW2-G302	6.63 NJ	0.357 U	0.306 U	13.1 NJ	0.616 U	19.7 JT
G303	LW2-G303	0.308 J	0.0296 UJ	0.0254 U	0.232 J	0.0511 U	0.54 JT
G305	LW2-G305	0.0565 U	0.0357 U	1.33 J	0.0707 U	0.0616 U	1.33 JT
G306	LW2-G306	0.045 J	0.0233 U	0.02 U	0.0463 U	0.076 J	0.121 JT
G307	LW2-G307	0.775 NJ	0.559 NJ	1.69 NJ	0.239 J	0.956 NJ	4.22 JT
G308	LW2-G308	0.608 J	0.502 NJ	0.117 U	0.27 U	0.83 J	1.94 JT
G309	LW2-G309	0.753 J	0.237 NJ	0.0326 UJ	0.357 NJ	0.0657 U	1.35 JT
G310	LW2-G310	0.942 NJ	0.295 NJ	1.72 J	0.147 J	0.0619 U	3.1 JT
G311-1	LW2-G311-1	109 NJT	0.0324 UJT	0.0274 UJT	0.0634 UJT	137 NJT	246 JT
G311-2	LW2-G311-2	0.0441 UJ	0.389 UJ	0.0239 UJ	0.0552 UJ	0.599 NJ	0.599 JT
G313	LW2-G313	1.06 NJ	0.297 NJ	0.027 U	0.192 J	0.0544 U	1.55 JT
G314	LW2-G314	0.585 J	0.143 NJ	0.0666 U	0.154 U	0.134 U	0.728 JT
G315	LW2-G315	0.224 U	0.142 U	0.121 U	0.281 U	5.93 NJ	5.93 JT
G316	LW2-G316	0.173 U	0.11 U	0.0939 U	0.217 U	0.189 U	0.217 UT
G317	LW2-G317	0.069 J	0.101 J	0.0215 U	0.0497 U	0.0433 U	0.17 JT
G318	LW2-G318	0.182 U	0.115 UJ	0.0987 U	0.228 UJ	0.199 U	0.228 UJT
G319	LW2-G319	0.0346 U	0.0218 U	0.0187 U	0.0433 U	0.0377 U	0.0433 UT
G320	LW2-G320	0.178 U	0.112 UJ	0.0962 U	0.222 UJ	0.194 U	0.222 UJT
G321	LW2-G321	0.0366 U	0.0231 U	0.0198 U	0.0458 U	0.0399 U	0.0458 UT
G322	LW2-G322	2.72 NJ	0.293 NJ	0.124 U	0.288 U	0.251 U	3.01 JT
G323	LW2-G323	0.168 U	0.106 UJ	0.091 U	0.21 UJ	0.183 U	0.21 UJT
G324-1	LW2-G324-1	0.0353 UJ	0.0223 UJ	0.0191 UJ	0.0442 U	0.0385 U	0.0442 UT
G324-2	LW2-G324-2	0.0333 UJ	0.0211 UJ	0.018 UJ	0.0417 U	0.0363 U	0.0417 UT
G325	LW2-G325	0.213 NJ	0.0248 U	0.0213 U	0.0492 U	0.0428 U	0.213 JT
G326	LW2-G326	0.911 NJ	0.16 NJ	0.0211 U	0.244 NJ	0.0426 U	1.32 JT
G327	LW2-G327	0.769 NJ	2.23 NJ	0.102 U	0.613 NJ	0.206 U	3.61 JT
G328	LW2-G328	0.0365 U	0.023 U	0.0198 U	0.0457 U	0.0398 U	0.0457 UT
G329	LW2-G329	0.541 J	0.373 J	0.0172 U	0.0397 U	0.0346 U	0.914 JT
G330	LW2-G330	0.288 U	5.64 NJ	0.156 U	0.361 U	0.314 U	5.64 JT
G331	LW2-G331	0.173 U	0.109 UJ	0.0938 U	0.217 UJ	2.37 J	2.37 JT
G332	LW2-G332	5.24 J	2.98 J	3.58 J	0.0684 UJ	0.0595 UJ	11.8 JT
G333	LW2-G333	8.5 J	0.156 UJ	0.133 U	0.309 UJ	0.269 U	8.5 JT
G334	LW2-G334	0.0501 UJ	0.0317 UJ	0.0271 UJ	32.2 NJ	0.0546 UJ	32.2 JT
G335	LW2-G335	0.168 U	0.106 UJ	0.0909 U	0.945 NJ	0.183 U	0.945 JT
G336	LW2-G336	0.484 J	0.237 NJ	0.0186 U	0.0429 UJ	0.244 NJ	0.965 JT
G337	LW2-G337	0.111 J	0.268 J	0.0302 U	0.0698 U	0.0608 U	0.379 JT
G338	LW2-G338	0.368 J	0.284 J	0.0299 U	0.0691 U	0.407 J	1.06 JT
G339	LW2-G339	0.24 UJ	0.152 UJ	0.13 U	0.301 U	0.262 U	0.301 UT
G340	LW2-G340	0.0428 U	0.027 U	0.0232 U	0.0535 U	0.0466 U	0.0535 UT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	5103-71-9	5103-74-2	27304-13-8	5103-73-1	39765-80-5	Total
	Chemical Name	cis-Chlordane	trans-Chlordane	Oxychlordane	cis-Nonachlor	trans-Nonachlor	Chlordanes
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID						
G341	LW2-G341	0.21 J	0.0348 U	0.0299 U	0.069 U	0.0601 U	0.21 JT
G342	LW2-G342	0.16 NJ	0.0326 U	0.0279 U	0.0646 U	0.145 J	0.305 JT
G343	LW2-G343	0.122 J	0.322 J	0.0284 U	0.0656 U	0.11 J	0.554 JT
G344	LW2-G344	0.269 J	0.0361 U	0.031 U	0.0716 U	0.44 J	0.709 JT
G345-1	LW2-G345-1	1.56 JT	0.184 NJT	0.0271 UJT	0.0627 UJT	0.0546 UJT	1.74 JT
G345-2	LW2-G345-2	0.0486 UJ	0.237 NJ	0.0263 UJ	0.0608 U	0.0529 U	0.237 JT
G346	LW2-G346	0.159 J	0.3	0.0313 U	0.0724 U	0.197 NJ	0.656 JT
G347	LW2-G347	0.233 NJ	0.0367 U	0.0314 U	0.393 NJ	0.247 J	0.873 JT
G348	LW2-G348	12.1 NJ	0.119 UJ	0.102 U	0.237 UJ	0.206 U	12.1 JT
G349	LW2-G349	2.66 J	1.17 J	2.52 J	0.0659 U	0.0574 U	6.35 JT
G350	LW2-G350	0.0483 U	0.477 NJ	0.0261 U	0.0605 UJ	2.38	2.86 JT
G351	LW2-G351	20 NJ	0.966 NJ	0.133 U	0.308 U	0.268 U	21 JT
G351-2	LW2-G351-2	0.509 UT	0.322 UT	0.276 UT	7.54 JT	10.1 JT	17.6 JT
G352	LW2-G352	0.174 J	0.415 NJ	0.0266 U	0.0616 U	0.175	0.764 JT
G353-1	LW2-G353-1	35.5 NJ	0.166 U	5.46 J	0.33 U	14.5 NJ	55.5 JT
G353-2	LW2-G353-2	0.249 UJ	0.157 UJ	6.79 J	7.53 NJ	9.98 NJ	24.3 JT
G354	LW2-G354	0.187 J	0.5 J	0.0319 U	0.0739 U	0.173 J	0.86 JT
G355	LW2-G355	0.361 U	64.8 J	0.195 U	378 NJ	226 NJ	669 JT
G356	LW2-G356	2.97 NJ	0.204 U	0.175 U	0.405 U	0.353 U	2.97 JT
G357	LW2-G357	0.071 J	0.233 J	0.023 U	0.0531 U	0.0463 U	0.304 JT
G358	LW2-G358	0.219	0.381 NJ	0.0327 U	0.0757 U	0.348 NJ	0.948 JT
G359	LW2-G359	1.53	1.6 J	2.71 J	0.0739 U	0.0643 U	5.84 JT
G360	LW2-G360	11.4 NJ	0.316 U		0.626 U	11 NJ	22.4 JT
G361	LW2-G361	0.127 J	0.373 NJ	0.0326 U	0.0754 U	0.188	0.688 JT
G362-1	LW2-G362-1	0.362 JT	0.183 UT	0.0313 UT	0.0725 UT	0.315 UT	0.362 JT
G362-2	LW2-G362-2	0.286 UJ	0.18 U	0.155 U	0.358 U	0.311 U	0.358 UT
G363	LW2-G363	0.205	0.225 NJ	0.166 U	0.179 NJ	0.21	0.819 JT
G364	LW2-G364	0.0401 U	0.0253 U	0.0217 U	0.073 J	0.0437 U	0.073 JT
G365	LW2-G365	0.558 J	0.0279 U	2.76 J	0.0554 U	0.0482 U	3.32 JT
G366	LW2-G366	0.293 UJ	0.37 NJ	0.159 U	0.367 U	8.78 NJ	9.15 JT
G367	LW2-G367	0.402 NJ	0.425 NJ	0.0202 U	0.776 J	1.2 NJ	2.8 JT
G368	LW2-G368	0.297 U	0.188 U	0.161 U	0.372 U	0.324 U	0.372 UT
G369	LW2-G369	0.155 J	0.511 NJ	0.0349 U	0.0807 U	0.255 J	0.921 JT
G370	LW2-G370	0.847 J	0.525 NJ	0.157 U	0.364 U	0.892 NJ	2.26 JT
G371	LW2-G371	1.18 NJ	0.26 NJ	0.104 U	0.24 U	1.46 NJ	2.9 JT
G372-1	LW2-G372-1	0.271 JT	0.473 JT	0.202 UT	0.202 UT	0.215 JT	0.959 JT
G372-2	LW2-G372-2	0.191 J	0.569 J	1.03 J	0.212 U	0.212 U	1.79 JT
G374	LW2-G374	0.182 NJ	0.548 NJ	0.0344 U	0.0795 U	0.198 J	0.928 JT
G376	LW2-G376	0.285 J	0.153 NJ	0.0332 U	0.117 J	0.067 U	0.555 JT
G377	LW2-G377	0.164 UJ	0.104 U	0.089 U	0.206 U	0.179 U	0.206 UT
G378	LW2-G378	0.324 NJ	0.455 J	0.0292 U	0.0674 UJ	0.2 J	0.979 JT
G379	LW2-G379	0.382 U	0.241 U	0.207 U	0.478 U	0.416 U	0.478 UT
G380	LW2-G380	0.164 UJ	0.103 U	0.0886 U	0.205 U	0.178 U	0.205 UT
G381	LW2-G381	0.603 NJ	0.405 NJ	0.03 U	0.432 NJ	0.272 NJ	1.71 JT
G382	LW2-G382	0.184 NJ	0.0418 U	0.0359 U	0.255	0.377 NJ	0.816 JT
G383	LW2-G383	0.326 U	0.339 NJ	0.176 U	0.408 U	0.355 U	0.339 JT
G384-1	LW2-G384-1	0.221 JT	0.0461 UT	0.0395 UT	0.0913 UT	0.0795 UT	0.221 JT
G384-2	LW2-G384-2	0.219 J	0.335 J	5.46 NJ	0.101 U	0.0882 U	6.01 JT
G385	LW2-G385	0.0711 U	1.41 J	0.0385 U	0.089 UJ	0.655 J	2.07 JT
G386	LW2-G386	0.126 J	0.131 NJ	0.0244 U	0.0564 U	0.0491 U	0.257 JT
G387	LW2-G387	0.137 J	0.0468 U	0.0401 U	0.0927 U	0.0807 U	0.137 JT
G389	LW2-G389	0.0399 U	0.0252 UJ	0.0216 U	0.05 UJ	0.0435 U	0.05 UJT
G390	LW2-G390	0.348 UJ	0.22 UJ	24.4 NJ	0.992 J	0.38 UJ	25.4 JT
G391	LW2-G391	0.248 J	0.539 NJ	0.0331 U	0.0765 U	0.232 J	1.02 JT
G392	LW2-G392	0.216 J	0.477 J	0.0273 U	0.141 J	0.44 NJ	1.27 JT
G393	LW2-G393	5.86 UJ	3.7 U	3.17 U	7.34 U	6.39 U	7.34 UT
G394	LW2-G394	14.2 NJ	3.08 J	0.121 UJ	0.28 UJ	0.243 UJ	17.3 JT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	5103-71-9 cis-Chlordane ug/kg	5103-74-2 trans-Chlordane ug/kg	27304-13-8 Oxychlordane ug/kg	5103-73-1 cis-Nonachlor ug/kg	39765-80-5 trans-Nonachlor ug/kg	Total Chlordanes ug/kg
Location	Sample ID						
G395	LW2-G395	0.214 NJ	0.313 NJ	0.0249 UJ	0.0576 UJ	0.105 J	0.632 JT
G396	LW2-G396	0.0414 U	0.0261 U	0.0224 U	0.0518 U	0.0451 U	0.0518 UT
G397	LW2-G397	0.169 J	0.23 U	0.23 U	0.23 U	0.23 U	0.169 JT
G398	LW2-G398	0.204 U	0.204 U	0.204 U	0.204 U	0.204 U	0.204 UT
G399	LW2-G399	0.193 UJ	0.205 NJ	0.613 J	0.242 UJ	0.211 UJ	0.818 JT
G401	LW2-G401	0.231 UJ	0.374 NJ	0.125 U	0.29 U	0.252 U	0.374 JT
G403	LW2-G403	0.0343 UJ	0.0216 U	0.0185 U	0.0429 U	0.0373 U	0.0429 UT
G404	LW2-G404	0.378 NJ	0.51 NJ	0.028 U	0.0647 UJ	0.437 J	1.33 JT
G405	LW2-G405	0.162 U	0.103 U	0.0879 U	0.203 U	0.177 U	0.203 UT
G406	LW2-G406	0.168 NJ	0.391 NJ	0.0249 U	0.0576 UJ	0.209 NJ	0.768 JT
G407	LW2-G407	0.259	0.278 J	0.0247 U	0.189 NJ	0.35 NJ	1.08 JT
G408	LW2-G408	0.448 J	0.0452 UJ	0.0387 U	0.273 J	0.0779 U	0.721 JT
G409	LW2-G409	0.168	0.373 NJ	0.027 U	0.0624 U	0.223 J	0.764 JT
G410-1	LW2-G410-1	0.21	0.609 NJ	0.0354 U	0.094 J	0.39 NJ	1.3 JT
G410-2	LW2-G410-2	0.317	0.677 NJ	0.0373 U	0.334 NJ	0.511 NJ	1.84 JT
G411	LW2-G411	0.0332 U	0.122 J	0.018 U	0.0415 U	0.099 J	0.221 JT
G412	LW2-G412	0.237 J	0.345 J	0.0268 U	0.0619 UJ	0.222	0.804 JT
G413	LW2-G413	0.0324 UJ	0.0205 U	0.578 J	0.0406 U	0.0353 U	0.578 JT
G414	LW2-G414	0.235 NJ	0.889 NJ	0.0278 U	0.265 NJ	0.16 J	1.55 JT
G415	LW2-G415	0.265 UJ	0.889 NJ	0.143 U	1.79 NJ	0.289 U	2.68 JT
G416	LW2-G416	0.474 J	0.0458 UJ	0.0393 U	0.0908 UJ	0.0791 U	0.474 JT
G417	LW2-G417	1.72 J	1.78 J	0.0193 U	0.658 J	1.68 J	5.84 JT
G418	LW2-G418	0.218 NJ	0.379 J	0.035 U	0.081 UJ	0.213 J	0.81 JT
G419	LW2-G419	0.216 J	0.476 NJ	0.0291 U	0.0674 UJ	0.187 J	0.879 JT
G420	LW2-G420	0.133 J	0.369 NJ	0.0269 U	0.443 NJ	0.235 J	1.18 JT
G422	LW2-G422	0.608 J	0.343 NJ	0.0234 U	0.28 NJ	0.659 NJ	1.89 JT
G423	LW2-G423	0.151 J	0.122 NJ	0.0312 U	0.0721 U	0.0628 U	0.273 JT
G424	LW2-G424	0.235 UJ	0.148 UJ	0.127 U	0.294 U	0.256 UJ	0.294 UT
G425	LW2-G425	0.434	0.538	0.0187 U	0.094 J	0.294	1.36 JT
G426	LW2-G426	0.367 UJ	0.232 U	0.199 UJ	0.459 UJ	0.4 UJ	0.459 UJT
G427	LW2-G427	0.302 J	0.263 NJ	0.029 U	0.23 NJ	0.565 NJ	1.36 JT
G428	LW2-G428	0.244 NJ	0.401 J	0.0285 U	0.066 UJ	0.201 J	0.846 JT
G429	LW2-G429	0.269 J	0.684 J	0.116 U	0.268 UJ	0.233 U	0.953 JT
G430	LW2-G430	0.0349 UJ	0.0221 U	0.0189 U	0.0437 U	0.0381 U	0.0437 UT
G431	LW2-G431	0.211 U	0.953 NJ	0.114 U	0.264 U	0.23 U	0.953 JT
G432	LW2-G432	0.583	0.379 NJ	0.0222 U	0.06 NJ	0.143 NJ	1.17 JT
G433-1	LW2-G433-1	0.19 J	0.115 NJ	0.0298 U	0.069 UJ	0.172 NJ	0.477 JT
G433-2	LW2-G433-2	0.204	0.151 NJ	0.0296 U	0.0685 U	0.337 NJ	0.692 JT
G434	LW2-G434	0.608 NJ	0.525 NJ	0.102 U	0.236 UJ	0.206 U	1.13 JT
G435	LW2-G435	0.354 NJ	0.284 J	0.0298 U	0.273 NJ	0.252 J	1.16 JT
G437	LW2-G437	0.175 J	0.16 NJ	0.0227 U	0.094 J	0.439 NJ	0.868 JT
G438	LW2-G438	0.406 J	0.14 NJ	0.2	0.0416 UJ	0.478 NJ	1.22 JT
G439	LW2-G439	0.534 J	0.18 U	0.154 U	0.356 U	0.31 U	0.534 JT
G441	LW2-G441	0.56	1.11 J	1.66 J	0.0586 U	0.608	3.94 JT
G442	LW2-G442	0.231 J	0.45 NJ	0.0253 U	0.172 NJ	0.192 J	1.05 JT
G443	LW2-G443	0.172 U	0.172 U	0.172 U	0.172 U	0.172 U	0.172 UT
G444	LW2-G444	17.9	22 J	21.5 J	1.35 J	4.67 J	67.4 JT
G445	LW2-G445	0.892 J	0.186 J	0.0235 U	0.0543 U	0.615 J	1.69 JT
G446	LW2-G446	0.162 UJ	0.102 UJ	0.0875 U	0.202 U	0.176 U	0.202 UT
G450-1	LW2-G450-1	1.1	1.24 J	3.47 J	0.275 J	1.27 J	7.36 JT
G450-2	LW2-G450-2	0.565 J	0.454 J	3.85 J	0.198 U	0.198 U	4.87 JT
G451	LW2-G451	0.098 J	0.122 NJ	0.0209 U	0.122 J	0.042 U	0.342 JT
G453	LW2-G453	203 J	445 NJ	0.155 UJ	11.8 J	0.312 UJ	660 JT
G454	LW2-G454	0.179 UJ	0.113 UJ	0.0969 U	0.224 U	0.195 U	0.224 UT
G455	LW2-G455	2.38 J	2.69 J	4.72 J	0.43 J	1.69 J	11.9 JT
G456	LW2-G456	2.67 NJ	2.08 NJ	0.107 UJ	0.248 UJ	4.26 NJ	9.01 JT
G457	LW2-G457	0.805 J	0.968 NJ	0.0276 UJ	0.64 NJ	0.812 J	3.23 JT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	CAS No / Chemical Name / Unit / Sample ID	5103-71-9 cis-Chlordane ug/kg	5103-74-2 trans-Chlordane ug/kg	27304-13-8 Oxychlordane ug/kg	5103-73-1 cis-Nonachlor ug/kg	39765-80-5 trans-Nonachlor ug/kg	Total Chlordanes ug/kg
G458	LW2-G458	0.172 J	0.282 J	0.187 U	0.187 U	0.187 U	0.454 JT
G459	LW2-G459	0.0347 UJ	0.11 NJ	0.0188 U	0.0434 U	0.0378 U	0.11 JT
G461	LW2-G461	0.36 J	1.21 NJ	0.0319 UJ	0.0739 UJ	0.354 J	1.92 JT
G463	LW2-G463	0.0397 UJ	0.0251 UJ	0.0215 U	0.0497 U	0.0432 U	0.0497 UT
G465	LW2-G465	0.086 J	0.194 NJ	0.0187 U	0.0431 U	0.066 J	0.346 JT
G466	LW2-G466	0.092 J	0.303 NJ	0.0267 UJ	0.0618 UJ	0.153 J	0.548 JT
G467	LW2-G467	1.01 J	1.44 NJ	0.0917 U	1.54 J	0.185 U	3.99 JT
G468	LW2-G468	0.328 J	1.08 NJ	0.0321 UJ	0.0742 UJ	0.263 J	1.67 JT
G469	LW2-G469	0.091 J	0.102 J	0.182 UJ	0.182 UJ	0.182 UJ	0.193 JT
G470	LW2-G470	0.109 J	0.317 NJ	0.0253 U	0.0586 U	0.051 U	0.426 JT
G472	LW2-G472	0.155 J	0.0236 UJ	0.0202 U	0.0467 U	0.0407 U	0.155 JT
G473	LW2-G473	3.41 J	4.58 NJ	0.131 U	1.46	2.99 NJ	12.4 JT
G474	LW2-G474	0.234 J	0.345 J	0.195 U	0.195 U	0.298 J	0.877 JT
G475-1	LW2-G475-1	0.16 J	0.379 NJ	0.0257 U	0.194 NJ	0.258 J	0.991 JT
G475-2	LW2-G475-2	0.0495 UJ	0.0312 UJ	0.0268 U	0.0619 U	0.0539 U	0.0619 UT
G476	LW2-G476	0.042 UJ	0.088 NJ	0.0227 U	0.074 J	0.0458 U	0.162 JT
G477	LW2-G477	1.38 J	0.144 UJ	0.123 U	1.47	0.248 U	2.85 JT
G478	LW2-G478	0.148 J	0.0299 UJ	0.0257 UJ	0.0594 UJ	0.286 J	0.434 JT
G479	LW2-G479	0.158 J	0.585 J	0.0287 UJ	0.0663 UJ	0.216 J	0.959 JT
G480	LW2-G480	0.401 J	0.961 NJ	0.0939 U	0.217 U	0.189 U	1.36 JT
G481	LW2-G481	0.105 J	0.237 NJ	0.0239 U	0.0553 U	0.0482 U	0.342 JT
G482	LW2-G482	0.412 NJ	0.685 NJ	0.0324 UJ	0.0749 UJ	0.411 J	1.51 JT
G483	LW2-G483	0.0516 UJ	0.0326 UJ	0.028 UJ	0.0646 UJ	0.0563 UJ	0.0646 UJT
G484	LW2-G484	0.146 J	0.304 NJ	0.0297 U	0.0687 U	0.179 NJ	0.629 JT
G485	LW2-G485	0.371 J	0.592 J	0.0232 UJ	0.257 NJ	0.367 J	1.59 JT
G486	LW2-G486	0.178 NJ	0.312 NJ	0.0292 U	0.0676 U	0.0589 U	0.49 JT
G487	LW2-G487	0.16 J	0.0211 UJ	0.0181 UJ	0.0418 UJ	0.0364 UJ	0.16 JT
G488	LW2-G488	0.286 J	0.971 NJ	0.0299 UJ	0.069 UJ	0.437 J	1.69 JT
G489	LW2-G489	0.218 J	0.515 NJ	0.0315 UJ	0.0729 UJ	0.272 J	1.01 JT
G490	LW2-G490	0.295 J	0.58 NJ	0.0311 U	0.3 NJ	0.298 NJ	1.47 JT
G491	LW2-G491	0.269 J	0.18 NJ	0.0284 UJ	0.27 NJ	0.197 J	0.916 JT
G492-1	LW2-G492-1	0.156 JT	0.535 JT	1.62 JT	0.146 UT	0.122 JT	2.43 JT
G492-2	LW2-G492-2	0.107 J	0.647 J	0.588 J	0.147 U	0.213 J	1.56 JT
G493	LW2-G493	0.323 NJ	0.42 NJ	0.176 UJ	0.176 U	0.198	0.941 JT
G494	LW2-G494	0.661 J	0.477 NJ	0.0278 U	0.298 J	0.0559 U	1.44 JT
G495	LW2-G495	0.378 NJ	0.0394 U	0.0338 U	0.289 NJ	0.0681 U	0.667 JT
G496	LW2-G496	0.102 J	0.0219 U	0.992 J	0.0435 U	0.089 J	1.18 JT
G497	LW2-G497	0.44 J	0.303 J	6.81 J	0.151 UJ	0.214 J	7.77 JT
G498	LW2-G498	0.341 J	0.513 NJ	0.027 U	0.352 J	0.25 NJ	1.46 JT
G499	LW2-G499	0.221	0.439 J	0.178 U	0.178 U	0.248 J	0.908 JT
G500	LW2-G500	0.639 U	0.273 NJ	0.639 U	0.639 U	0.639 U	0.273 JT
G501	LW2-G501	0.222 J	0.703 NJ	0.0341 U	0.185 J	0.0687 U	1.11 JT
G502	LW2-G502	0.492 U	0.492 U	0.492 U	0.492 U	0.492 U	0.492 UT
G503	LW2-G503	0.187 U	0.118 U	7.61 J	0.464 J	0.203 U	8.07 JT
G504	LW2-G504	0.788 NJ	0.111 NJ	0.46 J	0.337 NJ	0.807 NJ	2.5 JT
G505	LW2-G505	5.36 U	7.04 J	5.36 U	5.36 U	5.36 U	7.04 JT
G506	LW2-G506	0.7 U	0.7 U	0.7 U	0.7 U	0.7 U	0.7 UT
G507	LW2-G507	0.076 J	0.35 NJ	0.121 U	0.121 U	0.054 J	0.48 JT
G508	LW2-G508	4.99 U	4.99 U	4.99 U	4.99 U	4.99 U	4.99 UT
G509	LW2-G509	0.268 J	0.274 NJ	0.147 U	0.255 NJ	0.25	1.05 JT
G510	LW2-G510	0.31 J	0.436 J	0.179 U	0.153 J	0.319 J	1.22 JT
G511	LW2-G511	0.163 J	0.402 NJ	0.144 U	0.144 U	0.194	0.759 JT
G512	LW2-G512	0.168 J	0.302 NJ	0.131 U	0.128 NJ	0.125 J	0.723 JT
G513	LW2-G513	0.183	0.353 J	0.134 U	0.134 U	0.29 J	0.826 JT
G514	LW2-G514	0.213	0.357 J	0.169 U	0.188 NJ	0.235 J	0.993 JT
G515	LW2-G515	0.217	0.476 J	0.168 U	0.256 NJ	0.231 J	1.18 JT
G516	LW2-G516	0.463 J	0.798 NJ	0.598 U	0.598 U	0.248 NJ	1.51 JT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	5103-71-9	5103-74-2	27304-13-8	5103-73-1	39765-80-5	Total
	Chemical Name	cis-Chlordane	trans-Chlordane	Oxychlordane	cis-Nonachlor	trans-Nonachlor	Chlordanes
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID						
G517	LW2-G517	0.293	0.545 NJ	0.133 U	0.287 NJ	0.327 J	1.45 JT
G518	LW2-G518	1.29 U	1.29 U	1.29 U	1.29 U	1.29 U	1.29 UT
G519-1	LW2-G519-1	0.111 J	0.13 NJ	0.486 NJ	0.0775 U	0.099 J	0.826 JT
G519-1	LW2-G519-2	0.183 J	0.154 NJ	0.0342 U	0.0792 U	0.378 NJ	0.715 JT
G520	LW2-G520	0.464	0.769 NJ	0.0351 U	0.555 NJ	0.825 NJ	2.61 JT
G521	LW2-G521	0.924 J	0.393 NJ	0.153 U	0.353 U	0.783 J	2.1 JT
U1C-1	LW2-U1C-1	0.082 U	0.167 U	0.0206 U	0.0476 UJ	0.0415 U	0.167 UT
U1C-2	LW2-U1C-2	0.0358 U	0.113 U	0.0194 U	0.0448 UJ	0.0391 U	0.113 UT
U1C-3	LW2-U1C-3	0.0437 U	0.078 U	0.0237 U	0.0547 UJ	0.0477 U	0.078 UT
U2C-1	LW2-U2C-1	0.123 U	0.267 U	0.0256 U	0.128 J	0.057 J	0.185 JT
U2C-2	LW2-U2C-2	0.142	0.351 U	0.0225 U	0.052 UJ	0.0453 U	0.142 T
U2C-3	LW2-U2C-3	0.062 U	0.117 U	0.0216 U	0.0499 UJ	0.0434 U	0.117 UT
U3C-1	LW2-U3C-1	0.0373 U	0.0236 U	0.0202 U	0.0467 U	0.0407 U	0.0467 UT
U3C-2	LW2-U3C-2	0.11 NJ	0.0268 U	0.0229 U	0.053 U	0.06 J	0.17 JT
U3C-3	LW2-U3C-3	0.057 J	0.0256 U	0.0219 U	0.0508 U	0.0442 U	0.057 JT
U4Q-1	LW2-U4Q-1	0.29 NJ	0.121 NJ	0.0258 U	0.155	0.116 J	0.682 JT
U4Q-2	LW2-U4Q-2	0.192 NJ	0.299 NJ	0.0228 U	0.0528 U	0.102 J	0.593 JT
U4Q-3	LW2-U4Q-3	0.0415 U	0.218 NJ	0.0225 U	0.0519 U	0.131 J	0.349 JT
U5Q-1	LW2-U5Q-1	0.0351 U	0.09 J	0.019 U	0.0439 U	0.0382 U	0.09 JT
U5Q-2	LW2-U5Q-2	0.035 U	0.0221 U	0.0189 U	0.0438 U	0.0381 U	0.0438 UT
U5Q-3	LW2-U5Q-3	0.0365 U	0.0231 U	0.0198 U	0.0457 U	0.0398 U	0.0457 UT
U6TOC-1	LW2-U6TOC-1	0.214 NJ	0.153 NJ	0.0244 U	0.0565 U	0.0492 U	0.367 JT
U6TOC-2	LW2-U6TOC-2	0.478 NJ	0.113 NJ	0.0407 U	0.213 NJ	0.376 NJ	1.18 JT
U6TOC-3	LW2-U6TOC-3	0.289 NJ	0.061 NJ	0.0385 U	0.0891 U	0.0776 U	0.35 JT
Subsurface Sediment Samples							
C009	LW2-C009-B	0.0299 UJ	0.0189 UJ	0.0162 UJ	2.05 NJ	0.0326 UJ	2.05 JT
C009	LW2-C009-C	0.0419 U	0.108 J	0.0227 U	0.0525 U	0.0457 U	0.108 JT
C011-1	LW2-C011-B1	0.0359 UJT	0.0227 UJT	0.0194 UJT	0.22 UJT	0.0391 UJT	0.22 UJT
C011-1	LW2-C011-C1	0.814 JT	0.429 NJT	0.0242 UJT	0.306 JT	0.0487 UJT	1.55 JT
C011-1	LW2-C011-D1	0.362 UJT	0.229 UJT	0.196 UJT	0.454 UJT	0.395 UJT	0.454 UJT
C011-2	LW2-C011-B2	0.034 U	0.0215 U	0.0184 U	0.0426 U	0.0371 U	0.0426 UT
C011-2	LW2-C011-C2	0.368 U	0.232 U	0.199 U	0.461 U	0.401 U	0.461 UT
C011-2	LW2-C011-D2	1.12 J	0.47 NJ	0.0243 U	0.467 NJ	0.0489 U	2.06 JT
C011-2	LW2-C011-E2	0.0348 U	0.0219 U	0.0188 U	0.0435 U	0.0379 U	0.0435 UT
C015	LW2-C015-B	0.598 J	0.299 NJ	0.0235 UJ	4 NJ	0.0474 UJ	4.9 JT
C015	LW2-C015-C	0.354 U	0.299 J	0.192 U	0.443 U	0.386 U	0.299 JT
C015	LW2-C015-D	0.411 U	0.26 U	0.222 U	0.514 U	0.448 U	0.514 UT
C019-1	LW2-C019-B1	0.0324 U	0.0204 U	0.0175 U	1.26 NJ	0.0353 U	1.26 JT
C019-1	LW2-C019-C1	0.342 U	0.216 U	0.185 U	0.429 U	0.373 U	0.429 UT
C020	LW2-C020-B	0.364 J	0.255 NJ	0.0253 U	1.26 NJ	0.051 U	1.88 JT
C020	LW2-C020-C	1.55 J	0.814 NJ	0.0916 U	4.47 NJ	0.184 U	6.83 JT
C022	LW2-C022-B	0.737 J	0.524 J	0.0264 U	0.275 J	0.773 J	2.31 JT
C022	LW2-C022-C	0.527 J	0.292 NJ	0.0273 U	0.308 J	0.476 NJ	1.6 JT
C025-1	LW2-C025-B1	0.0355 U	0.0224 U	0.0192 U	0.0445 U	0.0387 U	0.0445 UT
C025-1	LW2-C025-C1	0.0429 U	0.0271 U	0.0232 U	0.0538 U	0.0468 U	0.0538 UT
C025-2	LW2-C025-D2	0.0349 UJ	0.022 UJ	0.0189 UJ	0.0437 UJ	0.038 UJ	0.0437 UJT
C027	LW2-C027-B	0.091 J	0.0237 UJ	0.0203 UJ	0.0469 UJ	0.0408 UJ	0.091 JT
C027	LW2-C027-C	0.0415 UJ	0.0262 UJ	0.0225 UJ	0.052 UJ	0.0452 UJ	0.052 UJT
C034	LW2-C034-B	0.0353 UJ	0.0223 UJ	0.14 NJ	0.0442 UJ	0.0385 UJ	0.14 JT
C034	LW2-C034-C	0.0356 UJ	0.0225 UJ	0.0192 UJ	0.0445 UJ	0.0388 UJ	0.0445 UJT
C034	LW2-C034-E	0.0358 UJ	0.0226 UJ	0.0194 UJ	0.0448 UJ	0.039 UJ	0.0448 UJT
C038	LW2-C038-B	0.0358 U	0.0226 UJ	0.0194 U	0.0448 UJ	0.039 U	0.0448 UJT
C038	LW2-C038-C	0.0334 U	0.0211 UJ	0.0181 U	0.0418 UJ	0.0364 U	0.0418 UJT
C038	LW2-C038-D	0.046 J	0.0254 UJ	0.0217 UJ	0.0503 UJ	0.0438 UJ	0.046 JT
C060	LW2-C060-B	5.75 NJ	0.262 NJ	0.123 UJ	0.285 UJ	0.248 UJ	6.01 JT
C060	LW2-C060-C	3.25 NJ	0.146 UJ	0.125 UJ	0.959 NJ	0.253 UJ	4.21 JT
C062	LW2-C062-B	0.0335 U	0.0212 UJ	0.0182 U	0.042 UJ	0.0366 U	0.042 UJT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	5103-71-9 cis-Chlordane ug/kg	5103-74-2 trans-Chlordane ug/kg	27304-13-8 Oxychlordane ug/kg	5103-73-1 cis-Nonachlor ug/kg	39765-80-5 trans-Nonachlor ug/kg	Total Chlordanes ug/kg
Location	**Sample ID**						
C062	LW2-C062-C	0.0359 U	0.0226 UJ	0.0194 U	0.0449 UJ	0.0391 U	0.0449 UJT
C062	LW2-C062-D	0.0355 U	0.0224 UJ	0.0192 U	0.0444 UJ	0.0387 U	0.0444 UJT
C064	LW2-C064-B	0.226 UJ	0.143 UJ	0.123 UJ	0.284 UJ	0.247 UJ	0.284 UJT
C064	LW2-C064-C	0.0402 UJ	0.0254 UJ	0.0218 UJ	0.0503 UJ	0.0438 UJ	0.0503 UJT
C066	LW2-C066-B	0.0406 UJ	0.0256 UJ	0.022 UJ	0.0508 UJ	0.0443 UJ	0.0508 UJT
C066	LW2-C066-C	0.157 NJ	0.0246 UJ	0.0211 UJ	0.0488 UJ	0.0425 UJ	0.157 JT
C067	LW2-C067-B	0.392 J	0.301 NJ	0.0243 U	0.447 NJ	0.329 NJ	1.47 JT
C067	LW2-C067-D	0.23 U	0.414 J	0.125 U	0.288 UJ	0.251 U	0.414 JT
C067	LW2-C067-E	0.204 U	0.129 U	0.111 U	0.256 UJ	0.223 U	0.256 UJT
C073	LW2-C073-B	0.0354 UJ	0.0224 UJ	0.0192 UJ	0.0444 UJ	0.0386 UJ	0.0444 UJT
C073	LW2-C073-C	0.309 J	0.24 NJ	0.106 UJ	0.246 UJ	0.214 UJ	0.549 JT
C073	LW2-C073-D	0.166 UJ	0.105 UJ	0.0897 UJ	0.207 UJ	0.181 UJ	0.207 UJT
C074	LW2-C074-B	0.292	0.182 J	0.0231 U	0.153 J	0.145 J	0.772 JT
C074	LW2-C074-C	0.176 U	0.111 U	0.0955 U	0.221 UJ	0.192 U	0.221 UJT
C074	LW2-C074-D	0.039 U	0.0246 U	0.0211 U	0.0488 UJ	0.0425 U	0.0488 UJT
C074	LW2-C074-F	0.0356 U	0.0225 U	0.0193 U	0.0445 U	0.0388 U	0.0445 UT
C077	LW2-C077-C	0.19 UJ	0.12 UJ	0.103 UJ	0.238 UJ	0.207 UJ	0.238 UJT
C077	LW2-C077-D	0.0414 UJ	0.0261 UJ	0.0224 UJ	0.0518 UJ	0.0451 UJ	0.0518 UJT
C086	LW2-C086-B	0.141 NJ	0.0289 UJ	0.0248 UJ	0.0573 UJ	0.0499 UJ	0.141 JT
C086	LW2-C086-C	0.0301 UJ	0.019 UJ	0.0163 UJ	0.0377 UJ	0.0328 UJ	0.0377 UJT
C093	LW2-C093-B	0.609 U	0.385 U	0.33 U	5.3 J	0.664 U	5.3 JT
C093	LW2-C093-C	0.0356 U	0.0225 U	0.0193 U	0.0446 U	0.0388 U	0.0446 UT
C105	LW2-C105-B	0.26 NJ	0.0272 U	0.0233 U	0.0539 UJ	0.047 U	0.26 JT
C105	LW2-C105-C	0.0414 U	0.0261 U	0.0224 U	0.0518 UJ	0.0451 U	0.0518 UJT
C111-1	LW2-C111-B	0.65 J	0.407 NJ	0.025 U	0.324 J	0.997 J	2.38 JT
C111-1	LW2-C111-C	1.21 NJ	0.565 NJ	0.0265 U	0.462 NJ	0.0534 U	2.24 JT
C111-1	LW2-C111-F	0.194 U	0.122 U	0.105 U	0.243 UJ	0.211 U	0.243 UJT
C111-2	LW2-C111-B2	0.581 NJ	0.21 NJ	2.97	0.323 NJ	0.772 NJ	4.86 JT
C111-2	LW2-C111-C2	2.57 NJ	0.583 NJ	0.126 U	0.292 UJ	0.255 U	3.15 JT
C111-2	LW2-C111-E2	11.3 NJ	0.37 NJ	0.119 UJ	0.988 NJ	0.24 UJ	12.7 JT
C112	LW2-C112-B	0.488 J	0.367 NJ	0.0256 U	0.292 J	0.0516 U	1.15 JT
C112	LW2-C112-C	2.02 NJ	0.463 NJ	0.13 U	0.301 UJ	0.262 U	2.48 JT
C112	LW2-C112-D	6.27 NJ	0.626 J	0.129 U	0.299 UJ	0.261 U	6.9 JT
C121	LW2-C121-B	1.29 NJ	0.137 UJ	0.117 UJ	0.271 UJ	0.236 UJ	1.29 JT
C121	LW2-C121-C	0.389 J	0.135 UJ	0.115 UJ	0.408 J	0.233 UJ	0.797 JT
C122	LW2-C122-B	0.884 NJ	0.617 J	0.122 U	0.281 U	0.245 U	1.5 JT
C122	LW2-C122-C	5.94 NJ	0.646 NJ	0.223 U	0.516 U	0.449 U	6.59 JT
C130	LW2-C130-B	0.268 U	0.852 NJ	0.145 U	3.02 NJ	0.292 U	3.87 JT
C130	LW2-C130-C	0.0315 U	0.0199 U	0.0171 U	0.0395 U	0.0344 U	0.0395 UT
C130	LW2-C130-E	0.0364 U	0.023 U	0.0197 U	0.0456 U	0.0397 U	0.0456 UT
C133	LW2-C133-B	0.539 J	0.564 NJ	0.028 UJ	0.424 NJ	0.57 NJ	2.1 JT
C133	LW2-C133-D	2.8 J	0.656 NJ	0.126 UJ	0.292 UJ	0.254 UJ	3.46 JT
C136	LW2-C136-B	0.812 J	0.924	0.153 U	0.355 U	0.309 U	1.74 JT
C136	LW2-C136-C	2.5 NJ	0.169 U	0.145 U	0.335 U	0.291 U	2.5 JT
C136	LW2-C136-D	6.96 NJ	0.343 J	0.126 U	1.58 NJ	0.253 U	8.88 JT
C139	LW2-C139-B	0.259 UJ	0.163 UJ	0.14 U	0.324 UJ	0.282 U	0.324 UJT
C139	LW2-C139-C	0.625 J	0.403 NJ	0.0427 U	0.315 J	0.086 U	1.34 JT
C142	LW2-C142-B	13.4 NJ	0.595 NJ	0.134 U	1.09 J	15.9 NJ	31 JT
C142	LW2-C142-C	9.52 J	1.54 J	0.247 U	3.23 J	21.8 J	36.1 JT
C147	LW2-C147-B	1.54 NJ	0.395 NJ	0.131 U	0.302 U	0.263 U	1.94 JT
C147	LW2-C147-C	10.3 NJ	0.253 NJ	0.119 U	0.275 U	26 NJ	36.6 JT
C147	LW2-C147-E	3.85 NJ	1.08 J	0.25 U	0.579 U	0.504 U	4.93 JT
C155	LW2-C155-B	0.216 U	0.137 U	0.117 U	0.271 U	0.236 U	0.271 UT
C155	LW2-C155-C	0.216 U	0.136 U	0.117 U	0.27 U	0.235 U	0.27 UT
C157	LW2-C157-B	0.23 UJ	0.145 UJ	0.124 UJ	0.288 UJ	0.25 UJ	0.288 UJT
C157	LW2-C157-C	0.213 UJ	0.134 UJ	0.115 UJ	0.266 UJ	0.232 UJ	0.266 UJT
C160	LW2-C160-B	0.228 UJ	0.144 UJ	0.123 UJ	0.285 UJ	0.249 UJ	0.285 UJT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	5103-71-9	5103-74-2	27304-13-8	5103-73-1	39765-80-5	Total
	Chemical Name	cis-Chlordane	trans-Chlordane	Oxychlordane	cis-Nonachlor	trans-Nonachlor	Chlordanes
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID						
C160	LW2-C160-C	0.218 UJ	0.138 UJ	0.118 UJ	0.273 UJ	0.238 UJ	0.273 UJT
C161	LW2-C161-B	0.236 UJ	0.149 UJ	0.128 UJ	0.295 UJ	0.257 UJ	0.295 UJT
C161	LW2-C161-C	0.196 UJ	0.124 UJ	0.106 UJ	0.246 UJ	0.214 UJ	0.246 UJT
C163-1	LW2-C163-B1	0.0329 UJ	0.0208 UJ	0.0178 UJ	0.0412 UJ	0.0359 UJ	0.0412 UJT
C163-1	LW2-C163-C1	0.0506 UJ	0.032 UJ	0.0274 UJ	0.0634 UJ	0.0552 UJ	0.0634 UJT
C163-2	LW2-C163-B2	0.0307 UJT	0.0194 UJT	0.0166 UJT	0.0385 UJT	0.0335 UJT	0.0385 UJT
C163-2	LW2-C163-C2	0.204 UJT	0.129 UJT	0.111 UJT	0.256 UJT	0.223 UJT	0.256 UJT
C164	LW2-C164-B	0.0316 U	0.131 NJ	0.0171 U	0.099 NJ	0.0345 U	0.23 JT
C164	LW2-C164-C	0.0331 U	0.0209 U	0.0179 U	0.0415 U	0.0361 U	0.0415 UT
C164	LW2-C164-E	2.94 NJ	0.58 NJ	0.117 U	0.27 U	0.236 U	3.52 JT
C166	LW2-C166-B	0.192 UJ	0.121 UJ	0.104 UJ	0.24 UJ	0.209 UJ	0.24 UJT
C166	LW2-C166-C	7.57 NJ	0.345 NJ	0.734 J	0.264 UJ	0.23 UJ	8.65 JT
C166	LW2-C166-D	8.35 NJ	0.22 NJ	0.114 UJ	0.264 UJ	0.23 UJ	8.57 JT
C170	LW2-C170-B	0.209 U	0.132 U	0.113 U	0.261 U	0.228 U	0.261 UT
C170	LW2-C170-C	0.0348 U	0.022 U	0.0188 U	0.0435 U	0.0379 U	0.0435 UT
C171	LW2-C171-B	0.425 J	0.33 NJ	0.0298 UJ	0.587 J	0.06 UJ	1.34 JT
C171	LW2-C171-C	0.952 J	0.508 NJ	0.108 U	0.329 J	0.218 U	1.79 JT
C172	LW2-C172-B	0.324 J	0.316 NJ	0.0264 U	0.575 NJ	0.311 J	1.53 JT
C172	LW2-C172-C	2.08 NJ	1.11 J	0.329 U	0.761 U	0.662 U	3.19 JT
C176	LW2-C176-B	0.579 J	0.196 NJ	0.0275 U	0.525 NJ	0.849 NJ	2.15 JT
C176	LW2-C176-C	0.2 NJ	0.0245 U	0.021 U	0.0486 U	0.0423 U	0.2 JT
C176	LW2-C176-G	0.0359 U	0.063 J	0.0195 U	0.045 U	0.0392 U	0.063 JT
C179	LW2-C179-B	0.456 UJ	0.288 UJ	0.247 U	0.571 UJ	0.497 U	0.571 UJT
C179	LW2-C179-C	0.233 UJ	0.147 UJ	0.126 U	0.292 UJ	0.254 U	0.292 UJT
C179	LW2-C179-D	0.221 UJ	0.14 UJ	0.12 U	0.574 J	0.241 U	0.574 JT
C182	LW2-C182-B	0.908 NJ	0.255 NJ	0.111 U	0.256 U	0.223 U	1.16 JT
C182	LW2-C182-C	7.09 NJ	0.374 NJ	0.126 U	0.292 U	0.254 U	7.46 JT
C184	LW2-C184-B	2.28 J	0.543 NJ	0.121 UJ	0.28 UJ	0.244 UJ	2.82 JT
C184	LW2-C184-C	14.2 NJ	0.271 U	0.232 U	0.537 U	38.3 NJ	52.5 JT
C184	LW2-C184-D	0.0392 U	0.0247 U	0.0212 U	0.049 U	0.0427 U	0.049 UT
C192	LW2-C192-B	1.36 J	0.47 NJ	0.119 U	0.275 U	0.24 U	1.83 JT
C192	LW2-C192-C	8.22 NJ	0.142 U	0.121 U	1.26 NJ	0.244 U	9.48 JT
C192	LW2-C192-D	0.171 U	0.108 U	0.0927 U	0.214 U	0.187 U	0.214 UT
C197	LW2-C197-B	0.247 U	1.06 NJ	0.134 U	0.309 U	2.63 NJ	3.69 JT
C197	LW2-C197-C	0.237 U	0.15 U	0.129 U	0.297 U	0.259 U	0.297 UT
C197	LW2-C197-D	0.0315 U	0.0199 U	0.017 U	0.0394 U	0.0343 U	0.0394 UT
C199	LW2-C199-B	0.217 U	0.436 NJ	3.86 NJ	0.271 U	0.526 J	4.82 JT
C199	LW2-C199-C	0.0396 U	0.025 U	0.0214 U	0.0496 U	0.0432 U	0.0496 UT
C202	LW2-C202-B	1.6 J	0.299 UJ	3.62 J	0.592 UJ	0.516 U	5.22 JT
C202	LW2-C202-C	0.486 UJ	0.307 UJ	0.263 U	0.609 UJ	0.53 U	0.609 UJT
C203	LW2-C203-B	0.378 J	0.147 UJ	1.68 NJ	0.292 UJ	0.254 UJ	2.06 JT
C203	LW2-C203-C	0.23 UJ	0.146 UJ	0.125 UJ	0.288 UJ	0.251 UJ	0.288 UJT
C203	LW2-C203-E	0.0391 UJ	0.0247 UJ	0.0212 U	0.0489 UJ	0.0426 U	0.0489 UJT
C206	LW2-C206-B	9.63 NJ	0.336 NJ	0.136 U	1.21 J	0.274 U	11.2 JT
C206	LW2-C206-C	0.0308 U	0.0195 U	0.0167 U	0.0386 U	0.0336 U	0.0386 UT
C207-1	LW2-C207-B	0.235 UJ	0.149 UJ	0.127 U	0.295 UJ	0.257 U	0.295 UJT
C207-1	LW2-C207-C	0.0384 UJ	0.0243 UJ	0.0208 UJ	0.0481 UJ	0.0419 UJ	0.0481 UJT
C207-1	LW2-C207-D	0.208 UJ	0.132 UJ	0.113 U	0.261 UJ	0.227 U	0.261 UJT
C207-2	LW2-C207-B2	0.238 UJT	0.151 UJT	0.129 UT	0.299 UJT	0.26 UT	0.299 UJT
C207-2	LW2-C207-C2	0.0393 UJT	0.0248 UJT	0.0213 UT	0.0492 UJT	0.0429 UT	0.0492 UJT
C210	LW2-C210-B	0.0378 U	0.0239 U	0.0205 U	0.069 J	0.0412 U	0.069 JT
C210	LW2-C210-C	0.035 U	0.0221 U	0.0189 U	0.0438 U	0.0381 U	0.0438 UT
C213	LW2-C213-B	0.0334 U	0.0211 U	0.0181 U	0.0419 U	0.0365 U	0.0419 UT
C213	LW2-C213-C	0.0364 U	0.023 U	0.0197 U	0.197 NJ	0.0397 U	0.197 JT
C213	LW2-C213-D	0.0355 U	0.039 J	0.0192 U	0.0444 U	0.0387 U	0.039 JT
C220	LW2-C220-B	0.173 UJ	0.109 UJ	0.0935 U	0.216 UJ	0.188 U	0.216 UJT
C220	LW2-C220-C	0.0376 UJ	0.0238 UJ	0.0204 UJ	0.0471 UJ	0.041 UJ	0.0471 UJT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	5103-71-9 cis-Chlordane ug/kg	5103-74-2 trans-Chlordane ug/kg	27304-13-8 Oxychlordane ug/kg	5103-73-1 cis-Nonachlor ug/kg	39765-80-5 trans-Nonachlor ug/kg	Total Chlordanes ug/kg
Location	**Sample ID**						
C221	LW2-C221-B	0.183 UJ	0.116 UJ	0.0991 U	0.229 UJ	0.2 U	0.229 UJT
C221	LW2-C221-C	0.183 UJ	0.116 UJ	0.0991 U	0.229 UJ	0.199 U	0.229 UJT
C228	LW2-C228-B	0.208 U	0.131 UJ	0.113 U	0.261 UJ	0.227 UJ	0.261 UJT
C231	LW2-C231-B	0.226 U	0.143 U	0.122 U	3.41 NJ	0.246 U	3.41 JT
C231	LW2-C231-C	0.19 U	1.16 NJ	0.103 U	0.238 U	0.429 J	1.59 JT
C232	LW2-C232-B	0.0314 U	0.0199 U	0.017 U	0.0394 UJ	0.0343 U	0.0394 UJT
C232	LW2-C232-C	0.0347 U	0.575 U	0.0188 U	0.0434 UJ	0.0378 U	0.575 UT
C240	LW2-C240-B	0.987 J	1.1 NJ	0.13 U	2.27 NJ	1.83 NJ	6.19 JT
C240	LW2-C240-D	1.08 U	0.682 U	0.584 U	1.35 U	1.18 U	1.35 UT
C240	LW2-C240-E	1.1 U	0.695 U	0.595 U	1.38 U	1.2 U	1.38 UT
C244	LW2-C244-B	0.308 J	0.172 NJ	2.5 NJ	0.629 NJ	0.388 J	4 JT
C244	LW2-C244-C	1.91 J	0.17 U	3.01 J	0.338 UJ	0.294 U	4.92 JT
C245	LW2-C245-B	0.229 U	0.145 U	0.124 U	0.287 U	0.25 U	0.287 UT
C245	LW2-C245-C	0.193 U	0.122 U	0.105 U	3.22 NJ	0.211 U	3.22 JT
C245	LW2-C245-D	0.221 U	0.14 U	0.12 U	0.277 U	1.04 NJ	1.04 JT
C245	LW2-C245-E	0.0388 U	0.0245 U	0.021 U	0.0486 U	0.054 J	0.054 JT
C247	LW2-C247-B	0.0366 UJ	0.0231 UJ	0.0198 U	0.0458 UJ	0.0399 UJ	0.0458 UJT
C247	LW2-C247-C	0.0365 UJ	0.0231 UJ	0.0198 U	0.0457 UJ	0.0398 UJ	0.0457 UJT
C247	LW2-C247-D	0.0374 UJ	0.0236 UJ	0.0202 U	0.0468 UJ	0.0407 UJ	0.0468 UJT
C252	LW2-C252-B	0.174 UJ	0.11 UJ	0.094 UJ	2.12 NJ	0.189 UJ	2.12 JT
C252	LW2-C252-C	0.444 U	0.28 U	0.24 U	0.555 U	0.484 U	0.555 UT
C254	LW2-C254-B	0.651 J	0.184 U	0.158 U	0.365 U	0.318 U	0.651 JT
C254	LW2-C254-C	0.0286 U	0.0181 U	0.0155 U	0.0359 U	0.0312 U	0.0359 UT
C255	LW2-C255-B	0.0333 U	0.021 U	0.018 U	0.0416 U	0.0363 U	0.0416 UT
C255	LW2-C255-C	0.0312 U	0.089 NJ	0.0169 U	0.0391 U	0.0341 U	0.089 JT
C257	LW2-C257-B	0.167 U	0.105 U	0.0904 U	0.209 U	1.06	1.06 T
C258	LW2-C258-B	0.182 U	0.115 U	0.0984 U	0.227 U	0.198 U	0.227 UT
C258	LW2-C258-C	0.176 U	0.111 UJ		0.22 UJ	0.192 U	0.22 UJT
C260	LW2-C260-B	0.169 UJ	0.107 UJ	0.0915 UJ	0.211 UJ	0.184 UJ	0.211 UJT
C260	LW2-C260-C	0.215 UJ	0.136 UJ	0.116 UJ	0.269 UJ	0.235 UJ	0.269 UJT
C263	LW2-C263-B	0.539 U	46.7 J	0.292 U	9.3 J	25.7 NJ	81.7 JT
C263	LW2-C263-D	0.496 U	0.313 U	5.15 NJ	1.18 J	0.541 U	6.33 JT
C264	LW2-C264-B	7.14 NJ	0.145 U	0.124 U	10.8 NJ	0.25 U	17.9 JT
C264	LW2-C264-C	1.43 J	0.128 U	0.11 U	3.03 J	2.45 NJ	6.91 JT
C266	LW2-C266-B	0.0308 UJ	0.0195 UJ	0.0167 UJ	0.0386 UJ	0.0336 UJ	0.0386 UJT
C266	LW2-C266-C	0.212 UJ	0.134 UJ	0.115 UJ	0.265 UJ	4.6 NJ	4.6 JT
C267	LW2-C267-B	0.236 UJ	0.248 NJ	0.128 UJ	0.295 UJ	0.257 UJ	0.248 JT
C267	LW2-C267-C	0.064 J	0.0197 U	0.0168 U	0.039 U	0.0339 U	0.064 JT
C268	LW2-C268-B	0.0342 U	0.0216 U	0.0185 U	0.0428 U	0.0373 U	0.0428 UT
C268	LW2-C268-C	0.0293 U	0.0185 U	0.0159 U	0.0367 U	0.0319 U	0.0367 UT
C269	LW2-C269-B	0.255 U	5.47 NJ	0.138 U	0.32 U	38.4 NJ	43.9 JT
C269	LW2-C269-C	0.238 U	5.06 NJ	0.129 U	2.04 NJ	26.6 NJ	33.7 JT
C269	LW2-C269-F	0.209 U	0.132 U	0.113 U	4.51 NJ	1.33 J	5.84 JT
C270	LW2-C270-B	6.83 NJ	0.779 U	0.668 U	1.54 U	1.34 U	6.83 JT
C270	LW2-C270-C	1.13 U	3.82 NJ	0.61 U	1.41 U	1.23 U	3.82 JT
C272	LW2-C272-B	0.033 U	0.0209 U	0.0179 U	0.0413 U	0.036 U	0.0413 UT
C272	LW2-C272-C	0.0308 U	0.0194 U	0.0167 U	0.0385 U	0.0335 U	0.0385 UT
C273	LW2-C273-B	0.522 U	6.92 NJ	0.282 U	10.3 NJ	0.569 U	17.2 JT
C273	LW2-C273-C	0.435 U	4.94	0.236 U	6.38 NJ	0.475 U	11.3 JT
C276	LW2-C276-B	4.76 NJ	0.443 NJ	0.133 U	3.09 NJ	0.268 U	8.29 JT
C276	LW2-C276-C	4.02	0.607 U	0.52 U	1.2 U	1.05 U	4.02 T
C277	LW2-C277-B	0.0531 U	0.0335 U	0.0287 U	0.466 J	0.0579 U	0.466 JT
C277	LW2-C277-C	0.97 NJ	0.464 NJ	0.0255 U	0.405 J	0.0514 U	1.84 JT
C277	LW2-C277-D	6.5 NJ	0.665 NJ	0.126 U	0.29 U	18.7 NJ	25.9 JT
C278	LW2-C278-B	10.2 NJ	0.352 NJ	0.276 UJ	8.03 NJ	7.26 NJ	25.8 JT
C278	LW2-C278-C	0.442 U	0.279 U	0.239 U	0.554 U	0.482 U	0.554 UT
C278	LW2-C278-D	0.0359 U	0.0227 U	0.0195 U	0.045 U	0.0392 U	0.045 UT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	CAS No / Chemical Name / Unit / Sample ID	5103-71-9 cis-Chlordane ug/kg	5103-74-2 trans-Chlordane ug/kg	27304-13-8 Oxychlordane ug/kg	5103-73-1 cis-Nonachlor ug/kg	39765-80-5 trans-Nonachlor ug/kg	Total Chlordanes ug/kg
C280	LW2-C280-B	0.238 U	0.151 U	0.129 U	0.299 U	0.26 U	0.299 UT
C280	LW2-C280-C	0.205 U	0.13 U	0.111 U	0.257 U	0.224 U	0.257 UT
C280	LW2-C280-D	0.18 U	0.114 U	0.0976 U	0.226 U	0.197 U	0.226 UT
C282	LW2-C282-B	0.0323 UJ	0.0204 UJ	0.0175 U	0.0405 UJ	0.0353 UJ	0.0405 UJT
C282	LW2-C282-C	0.0302 UJ	0.0191 UJ	0.0163 U	0.0378 UJ	0.0329 UJ	0.0378 UJT
C282	LW2-C282-D	0.0323 UJ	0.0204 UJ	0.0175 U	0.0404 UJ	0.0352 UJ	0.0404 UJT
C283	LW2-C283-B	0.975 U	0.616 U	0.528 U	1.22 UJ	1.06 U	1.22 UJT
C283	LW2-C283-C	0.831 U	0.525 U	0.45 U	1.04 UJ	0.906 U	1.04 UJT
C283	LW2-C283-E	0.036 U	0.0227 U	0.0195 U	0.0451 UJ	0.0392 U	0.0451 UJT
C284	LW2-C284-B	1.34 NJ	0.158 U	0.136 U	4.27 NJ	0.273 U	5.61 JT
C284	LW2-C284-C	1.06 U	0.669 U	0.573 U	1.33 U	1.15 U	1.33 UT
C284	LW2-C284-D	0.181 U	0.114 U	0.0978 U	0.226 U	0.197 U	0.226 UT
C288	LW2-C288-B	3.12 NJ	3.51 NJ	0.274 U	7.36 NJ	0.552 U	14 JT
C288	LW2-C288-C	0.467 U	4.13 NJ	0.253 U	5.88 J	2.92 NJ	12.9 JT
C288	LW2-C288-D	0.218 U	0.138 U	0.118 U	0.273 U	0.238 U	0.273 UT
C293-1	LW2-C293-B	0.284 UJ	0.18 UJ	0.154 UJ	0.83 J	0.31 UJ	0.83 JT
C293-1	LW2-C293-C	7.62 NJ	0.152 U	0.131 U	0.302 U	7.54 NJ	15.2 JT
C293-1	LW2-C293-D	0.0461 UJ	0.0291 UJ	0.0249 UJ	0.138 J	0.0502 UJ	0.138 JT
C293-2	LW2-C293-B2	5.32 NJ	0.174 U	0.149 U	0.726 NJ	0.3 U	6.05 JT
C293-2	LW2-C293-C2	0.24 U	0.152 U	0.13 U	0.3 U	0.262 U	0.3 UT
C294	LW2-C294-B	5.66 J	0.29 U	0.249 U	10.2 NJ	0.501 U	15.9 JT
C294	LW2-C294-C	0.456 U	3.4 NJ	0.247 U	0.571 U	0.497 U	3.4 JT
C294	LW2-C294-D	0.406 U	0.256 U	0.22 U	2.34 NJ	0.442 U	2.34 JT
C295	LW2-C295-B	1.24 NJ	0.455 NJ	0.0283 U	0.525 NJ	0.057 U	2.22 JT
C295	LW2-C295-C	51.3 NJ	1.07 NJ	0.261 U	0.841 J	0.526 U	53.2 JT
C301	LW2-C301-B	4.53 U	2.86 U	2.45 U	26.5 J	38.2 J	64.7 JT
C301	LW2-C301-C	25.4 U	9.4 U	8.06 U	18.6 UJ	55.5 J	55.5 JT
C301	LW2-C301-D	7.06 NJ	21.4 J	0.186 U	3.61 NJ	0.375 UJ	32.1 JT
C301	LW2-C301-E	12.4 U	7.82 U	6.71 U	15.5 UJ	13.5 U	15.5 UJT
C301	LW2-C301-G	0.807 U	0.51 U	0.437 U	1.01 UJ	0.88 U	1.01 UJT
C302	LW2-C302-B	32.9 NJ	0.699 U	0.599 U	9.57 NJ	1.21 U	42.5 JT
C302	LW2-C302-C	7.58 U	4.79 U	4.1 U	9.49 U	8.27 U	9.49 UT
C305-1	LW2-C305-B1	0.463 U	0.292 U	0.251 U	4.21 J	0.504 U	4.21 JT
C305-1	LW2-C305-C1	0.183 U	0.115 U	0.0989 U	0.229 U	1.12 J	1.12 JT
C305-1	LW2-C305-D1	0.142 NJ	0.022 U	0.0189 U	0.0436 U	0.038 U	0.142 JT
C305-2	LW2-C305-B2	8.63 NJ	0.277 U	0.237 U	0.549 U	0.478 U	8.63 JT
C305-2	LW2-C305-C2	20 NJ	0.28 U	0.24 U	11.4 NJ	0.483 U	31.4 JT
C305-2	LW2-C305-D2	0.0334 U	0.0211 U	0.0181 U	0.204 NJ	0.0364 U	0.204 JT
C311	LW2-C311-B	9.14 NJ	0.929 J	0.254 U	0.587 U	0.511 U	10.1 JT
C311	LW2-C311-C	0.468 U	0.713 NJ	0.253 U	0.586 U	0.51 U	0.713 JT
C311	LW2-C311-E	0.406 U	0.256 U	0.22 U	0.508 U	0.442 U	0.508 UT
C313	LW2-C313-B	0.0359 UJ	0.0227 UJ	0.0194 UJ	0.0449 UJ	0.0391 UJ	0.0449 UJT
C313	LW2-C313-C	0.0388 UJ	0.0245 UJ	0.021 UJ	0.0485 UJ	0.0423 UJ	0.0485 UJT
C314	LW2-C314-B	2.95 J	0.173 UJ	0.149 UJ	0.344 UJ	0.299 UJ	2.95 JT
C314	LW2-C314-C	23.8 NJ	0.15 UJ	0.128 UJ	0.297 UJ	27.3 NJ	51.1 JT
C316	LW2-C316-B	0.223 UJ	0.141 UJ	12.7 NJ	1.36 J	6.6 NJ	20.7 JT
C316	LW2-C316-C	14.8 J	0.809 NJ	9.09 NJ	1.97 J	27 NJ	53.7 JT
C316	LW2-C316-D	0.445 U	0.281 U	0.241 U	0.558 UJ	0.486 U	0.558 UJT
C323	LW2-C323-B	2.69 NJ	0.675 NJ	1.09 J	0.247 UJ	0.215 UJ	4.46 JT
C323	LW2-C323-C	0.366 NJ	0.178 NJ	0.265 NJ	0.0453 UJ	0.0394 UJ	0.809 JT
C323	LW2-C323-D	0.511 J	0.0226 U	0.0194 U	0.366 NJ	0.039 U	0.877 JT
C324	LW2-C324-B	0.416	0.393 NJ	0.0213 U	0.178 NJ	0.0429 U	0.987 JT
C324	LW2-C324-D	0.358	0.143 NJ	0.0207 U	0.147 J	0.0417 U	0.648 JT
C324	LW2-C324-E	1.09 NJ	0.504 J	0.112 UJ	0.26 UJ	0.226 UJ	1.59 JT
C326	LW2-C326-B	1.17 NJ	0.541 NJ	0.0266 UJ	0.32 J	0.0535 UJ	2.03 JT
C326	LW2-C326-C	0.314 NJ	0.0212 UJ	0.0182 UJ	0.0421 UJ	0.796 NJ	1.11 JT
C327	LW2-C327-B	0.346 J	0.248 NJ	0.405 NJ	0.217 J	0.24 NJ	1.46 JT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	5103-71-9	5103-74-2	27304-13-8	5103-73-1	39765-80-5	Total
	Chemical Name	cis-Chlordane	trans-Chlordane	Oxychlordane	cis-Nonachlor	trans-Nonachlor	Chlordanes
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID						
C327	LW2-C327-C	0.679 NJ	0.243 J	0.931 J	0.229 U	0.482 J	2.34 JT
C329	LW2-C329-B	0.402 NJ	0.402 NJ	0.0192 UJ	0.716 NJ	0.297 NJ	1.82 JT
C329	LW2-C329-C	1.2	0.123 U	0.105 U	0.243 U	0.212 U	1.2 T
C329	LW2-C329-D	0.869 NJ	0.114 U	0.0978 U	0.844 J	0.197 U	1.71 JT
C331	LW2-C331-B	0.369 NJ	0.129 NJ	0.018 U	0.282 NJ	0.0363 U	0.78 JT
C331	LW2-C331-C	0.173 U	0.11 U	0.0939 U	0.217 U	0.189 U	0.217 UT
C331	LW2-C331-D	0.0367 U	0.055 J	0.0199 U	0.046 U	0.0401 U	0.055 JT
C331	LW2-C331-E	0.0368 U	0.0232 U	0.0199 U	0.046 U	0.0401 U	0.046 UT
C332	LW2-C332-B	34.8 NJ	0.155 U	0.133 U	0.307 U	34.4 NJ	69.2 JT
C332	LW2-C332-C	0.0349 U	0.0221 U	0.0189 U	0.0437 U	0.0381 U	0.0437 UT
C333	LW2-C333-B	0.865 J	0.12 UJ	0.102 UJ	0.237 UJ	0.732 J	1.6 JT
C333	LW2-C333-C	0.0328 U	0.0207 U	0.0177 U	0.041 U	0.0357 U	0.041 UT
C333	LW2-C333-E	0.0381 U	0.278 NJ	0.0206 U	0.0477 U	0.0416 U	0.278 JT
C334	LW2-C334-B	17.1 NJ	8.24 J	0.129 U	8.79 J	16.1 J	50.2 JT
C334	LW2-C334-C	0.175 NJ	0.0224 U	0.0192 U	0.0445 U	0.0388 U	0.175 JT
C335	LW2-C335-B	0.18 UJ	0.114 UJ	0.0977 UJ	0.226 UJ	0.197 UJ	0.226 UJT
C335	LW2-C335-C	0.0298 UJ	0.0188 UJ	0.0161 UJ	0.0373 UJ	0.0324 UJ	0.0373 UJT
C341	LW2-C341-B	2.08 NJ	0.167 U	0.143 U	0.331 UJ	0.289 U	2.08 JT
C342	LW2-C342-B	0.595	0.451 NJ	0.0273 U	0.483 J	0.939 NJ	2.47 JT
C342	LW2-C342-C	2.07 NJ	0.695 NJ	0.122 U	0.456 J	0.246 U	3.22 JT
C342	LW2-C342-D	0.184 U	0.116 U	0.0998 U	0.231 U	0.201 U	0.231 UT
C346	LW2-C346-B	1.58 NJ	0.777 J	0.116 U	1.3	0.235 U	3.66 JT
C346	LW2-C346-C	0.208 U	0.131 U	0.113 U	0.26 U	0.227 U	0.26 UT
C347	LW2-C347-B	0.861 J	0.256 NJ	0.0322 U	0.397 J	0.524 J	2.04 JT
C347	LW2-C347-C	0.0494 U	0.0312 U	0.0267 U	0.154 J	0.0538 U	0.154 JT
C347	LW2-C347-F	1.51 J	2.42 J	0.0216 UJ	0.301 J	1.29 NJ	5.52 JT
C348	LW2-C348-B	0.237 U	12.3	32.8	29.5 NJ	16.5 J	91.1 JT
C348	LW2-C348-C	9.31 U	5.88 U	5.04 U	11.7 U	886 NJ	886 JT
C348	LW2-C348-D	0.172 U	0.298 J	0.093 U	0.215 U	0.668 NJ	0.966 JT
C349	LW2-C349-B	0.559 J	1.07 NJ	1.71 NJ	0.239 J	0.0588 U	3.58 JT
C349	LW2-C349-C	0.0506 UJ	0.88 J	1.59 NJ	0.238 J	2.29 NJ	5 JT
C351	LW2-C351-B	66.1 NJ	0.643 U	0.551 U	1.27 U	113 NJ	179 JT
C351	LW2-C351-C	0.0339 U	0.0214 U	0.0184 U	0.0425 U	0.037 U	0.0425 UT
C351	LW2-C351-D	0.0341 U	0.0215 U	0.0184 U	0.0427 U	0.0372 U	0.0427 UT
C351	LW2-C351-E	0.0335 U	0.0211 U	0.0181 U	0.0419 U	0.0365 U	0.0419 UT
C352	LW2-C352-B	0.482	0.855 NJ	0.0264 U	0.286 J	0.377 J	2 JT
C352	LW2-C352-C	0.374 J	0.294 NJ	0.025 U	0.188 J	0.464 NJ	1.32 JT
C352	LW2-C352-D	0.088 J	0.147 NJ	0.017 U	0.044 J	0.0342 U	0.279 JT
C356	LW2-C356-B	0.272 U	0.172 U	7.92 NJ	3.07 NJ	0.296 U	11 JT
C356	LW2-C356-C	2.45 U	653 NJ	339 J	3.07 U	2.67 U	992 JT
C356	LW2-C356-E	5.69 J	0.104 U	0.0894 U	0.207 U	6.95 NJ	12.6 JT
C357	LW2-C357-B	0.0475 UJ	0.03 UJ	0.854 J	0.0594 UJ	0.651 NJ	1.51 JT
C357	LW2-C357-C	0.0372 UJ	0.43 NJ	0.986 NJ	0.0465 UJ	0.0405 UJ	1.42 JT
C359	LW2-C359-B	0.246 U	0.994 J	0.133 U	0.52 J	6.62 NJ	8.13 JT
C359	LW2-C359-C	0.243 U	0.416 NJ	0.132 U	0.305 U	0.265 U	0.416 JT
C359	LW2-C359-D	50.8 J	4.24 NJ	0.246 U	0.568 U	0.494 U	55 JT
C361	LW2-C361-B	0.046 UJ	1.16 NJ	1.04 J	0.0576 UJ	1.04 NJ	3.24 JT
C362	LW2-C362-B	0.704 NJ	0.0316 U	0.0271 U	0.0626 U	1.76 NJ	2.46 JT
C362	LW2-C362-C	0.211	0.174 NJ	0.0252 U	0.17 J	0.0508 U	0.555 JT
C362	LW2-C362-D	3.25 NJ	3.94 NJ	0.127 U	1.02 J	1.87 J	10.1 JT
C364	LW2-C364-B	0.609 NJ	0.164 NJ	2.03 NJ	0.23 UJ	0.201 UJ	2.8 JT
C364	LW2-C364-C	0.207 U	0.131 U	0.112 U	0.26 U	0.226 U	0.26 UT
C366-1	LW2-C366-B1	1 UT	13 JT	32.6 JT	17.5 JT	30.2 JT	93.3 JT
C366-1	LW2-C366-C1	0.224 UJT	0.142 UJT	0.121 UJT	12.5 JT	15 JT	27.5 JT
C366-1	LW2-C366-D1	0.16 UT	0.101 UT	0.0867 UT	1.12 JT	1.85 JT	2.97 JT
C366-1	LW2-C366-E1	0.189 UT	0.119 UT	0.102 UT	0.236 UT	4.2 JT	4.2 JT
C366-1	LW2-C366-G1	0.0353 UT	0.0223 UT	0.0191 UT	0.0442 UT	0.0385 UT	0.0442 UT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	5103-71-9 cis-Chlordane ug/kg	5103-74-2 trans-Chlordane ug/kg	27304-13-8 Oxychlordane ug/kg	5103-73-1 cis-Nonachlor ug/kg	39765-80-5 trans-Nonachlor ug/kg	Total Chlordanes ug/kg
Location	**Sample ID**						
C366-2	LW2-C366-B2	0.253 U	2.6 NJ	12.1 NJ	0.317 U	19.2 NJ	33.9 JT
C366-2	LW2-C366-C2	0.229 U	0.145 U	0.124 U	0.287 U	0.25 U	0.287 UT
C366-2	LW2-C366-D2	0.197 U	0.124 U	0.107 U	0.246 U	3.99 NJ	3.99 JT
C366-2	LW2-C366-F2	0.0352 U	0.0222 U	0.0191 U	0.0441 U	0.0384 U	0.0441 UT
C368	LW2-C368-B	2.89	1.08 J	0.477 J	0.324 U	3.34 NJ	7.79 JT
C368	LW2-C368-C	2.01 NJ	0.125 U	0.107 U	1.4 J	3.57 NJ	6.98 JT
C368	LW2-C368-D	1.92 NJ	1.09 U	0.931 U	2.15 U	1.88 U	1.92 JT
C368	LW2-C368-E	0.166 U	0.105 U	0.0898 U	0.208 U	0.181 U	0.208 UT
C371	LW2-C371-B	0.198 U	0.125 U	10.1 J	0.248 U	5.53 NJ	15.6 JT
C371	LW2-C371-C	0.17 U	0.107 U	0.092 U	0.213 U	0.185 U	0.213 UT
C371	LW2-C371-E	0.0336 U	0.0212 U	0.0182 U	0.042 U	0.0366 U	0.042 UT
C372	LW2-C372-B	0.212 U	0.149 NJ	0.115 UJ	0.265 U	0.231 UJ	0.149 JT
C372	LW2-C372-C	0.187 U	0.118 U	0.101 UJ	0.234 U	0.203 UJ	0.234 UT
C377	LW2-C377-B	0.0437 U	0.0276 U	0.0237 U	0.0547 U	0.819 NJ	0.819 JT
C377	LW2-C377-C	0.232 U	0.147 U	0.126 U	0.29 U	2.48 NJ	2.48 JT
C377	LW2-C377-E	0.416 U	0.262 U	0.225 U	0.52 U	0.453 U	0.52 UT
C379	LW2-C379-B	0.263 UJ	4.16 NJ	0.142 UJ	0.635 J	0.287 UJ	4.8 JT
C379	LW2-C379-C	0.231 UJ	0.146 UJ	0.125 UJ	0.289 UJ	0.252 UJ	0.289 UJT
C379	LW2-C379-D	0.0379 UJ	0.0239 UJ	0.0205 UJ	0.0474 U	0.0413 UJ	0.0474 UT
C380	LW2-C380-B	0.0438 U	0.0277 U	0.0237 U	0.0549 U	0.0478 U	0.0549 UT
C380	LW2-C380-C	0.0414 UJ	0.0261 UJ	0.0224 UJ	0.0518 UJ	0.0451 UJ	0.0518 UJT
C382	LW2-C382-B	12.7 NJ	0.134 U	0.115 U	1.08 NJ	0.231 U	13.8 JT
C382	LW2-C382-C	0.422 NJ	0.0241 U	0.0207 U	0.079 J	0.0416 U	0.501 JT
C383	LW2-C383-B	0.238 J	0.269 NJ	0.0172 UJ	0.219 NJ	0.096 J	0.822 JT
C383	LW2-C383-C	0.0407 U	0.0257 U	0.022 U	0.0509 U	0.0444 U	0.0509 UT
C384	LW2-C384-B	0.491 UJ	0.31 UJ	0.266 UJ	1.97 NJ	0.535 UJ	1.97 JT
C384	LW2-C384-C	0.0324 UJ	0.0204 UJ	0.0175 UJ	0.0405 U	0.0353 UJ	0.0405 UT
C386	LW2-C386-B	0.464 NJ	0.501 NJ	0.0246 U	0.174 NJ	0.599 NJ	1.74 JT
C386	LW2-C386-C	0.0302 U	0.0191 U	0.0164 UJ	0.0379 U	0.033 UJ	0.0379 UT
C392	LW2-C392-B	0.41 J	0.127 NJ	0.0307 U	0.649 NJ	0.0619 U	1.19 JT
C392	LW2-C392-C	0.614 NJ	0.034 NJ	0.0188 U	0.135 NJ	0.0379 U	0.783 JT
C393	LW2-C393-B	0.194 UJ	0.123 U	0.105 U	0.243 U	0.212 U	0.243 UT
C393	LW2-C393-C	0.032 UJ	0.0202 U	0.0173 U	0.04 U	0.0349 U	0.04 UT
C396	LW2-C396-B	0.0405 U	0.0256 U	0.0219 U	0.0507 U	0.0441 U	0.0507 UT
C396	LW2-C396-C	0.0435 U	0.0275 U	0.0236 U	0.0545 U	0.0475 U	0.0545 UT
C397	LW2-C397-B	0.589 NJ	0.389 NJ		0.502 J	0.547 NJ	2.03 JT
C397	LW2-C397-C	0.741 NJ	0.362 NJ	0.0276 U	0.49	0.0557 U	1.59 JT
C397	LW2-C397-D	2.25 NJ	0.948 NJ	0.0271 UJ	0.348 J	0.0547 UJ	3.55 JT
C401	LW2-C401-B	0.781 NJ	0.6 NJ	0.106 U	0.246 U	0.483 NJ	1.86 JT
C401	LW2-C401-C	0.169 U	0.106 U	1.66 NJ	0.211 U	0.184 U	1.66 JT
C401	LW2-C401-D	0.55	0.501 J	0.0894 U	0.207 U	0.18 U	1.05 JT
C401	LW2-C401-E	1.36 NJ	0.578 NJ	0.105 U	0.244 U	0.212 U	1.94 JT
C403	LW2-C403-B	0.0347 U	0.0219 U	0.0188 U	0.0435 U	0.0379 U	0.0435 UT
C403	LW2-C403-C	0.0348 U	0.022 U	0.0188 U	0.0435 U	0.0379 U	0.0435 UT
C403	LW2-C403-D	0.0394 U	0.0249 U	0.0213 U	0.0493 U	0.043 U	0.0493 UT
C405	LW2-C405-B	1.77 J	1.32 NJ	0.101 U	0.686 J	1.15 J	4.93 JT
C405	LW2-C405-C	0.338 J	0.105 U	0.0899 U	0.208 U	0.203 NJ	0.541 JT
C409	LW2-C409-B	0.3 NJ	0.111 NJ	1.21 NJ	0.325 NJ	0.0461 U	1.95 JT
C409	LW2-C409-C	0.284 NJ	0.0214 U	0.0183 U	0.207	0.301 J	0.792 JT
C413-1	LW2-C413-B1	0.231 U	0.146 U	1.45 J	0.338 J	0.251 U	1.79 JT
C413-1	LW2-C413-C1	0.221 U	0.42 NJ	0.119 U	0.276 U	0.24 U	0.42 JT
C413-2	LW2-C413-B2	0.712	0.137 U	0.117 U	0.414 J	0.236 U	1.13 JT
C413-2	LW2-C413-C2	0.224 U	0.142 U	0.121 U	0.281 U	0.244 U	0.281 UT
C413-2	LW2-C413-D2	0.216 U	0.136 U	0.117 U	0.27 U	6.78 J	6.78 JT
C415	LW2-C415-B	0.0337 U	0.0213 U	0.0183 U	0.0422 U	0.0368 U	0.0422 UT
C415	LW2-C415-C	0.033 U	0.0209 U	0.0179 U	0.0413 U	0.036 U	0.0413 UT
C415	LW2-C415-D	0.0345 U	0.0218 U	0.0187 U	0.0432 U	0.0376 U	0.0432 UT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	5103-71-9 cis-Chlordane ug/kg	5103-74-2 trans-Chlordane ug/kg	27304-13-8 Oxychlordane ug/kg	5103-73-1 cis-Nonachlor ug/kg	39765-80-5 trans-Nonachlor ug/kg	Total Chlordanes ug/kg
Location	Sample ID						
C417	LW2-C417-B	0.799 J	0.802 NJ	0.0302 U	0.647 J	0.0609 U	2.25 JT
C417	LW2-C417-D	4.36 J	8.24 J	0.0187 U	1.05 NJ	2.53 J	16.2 JT
C420	LW2-C420-B	0.374 J	0.29 NJ	0.0258 U	0.173 J	0.204 J	1.04 JT
C420	LW2-C420-C	0.207 U	0.382 NJ	0.112 U	0.259 U	0.226 U	0.382 JT
C425-1	LW2-C425-B1	0.562 T	0.582 JT	0.0176 UT	0.174 T	0.358 JT	1.68 JT
C425-1	LW2-C425-C1	2.2 JT	2.24 JT	0.0182 UT	0.657 JT	1.31 JT	6.41 JT
C425-1	LW2-C425-E1	5 JT	3.27 JT	0.0184 UT	0.722 JT	2.03 JT	11 JT
C425-2	LW2-C425-B2	0.713 J	0.763 J	0.0968 U	0.224 U	0.743 NJ	2.22 JT
C425-2	LW2-C425-C2	1.12 J	1.29 J	0.0181 U	0.304 J	0.761 J	3.48 JT
C425-2	LW2-C425-D2	3.64 J	2.74 J	0.0213 U	0.611 J	1.67 J	8.66 JT
C426	LW2-C426-B	0.38 NJ	0.127 NJ	0.0271 UJ	0.0627 UJ	0.0546 UJ	0.507 JT
C426	LW2-C426-C	0.036 U	0.0227 U	0.0195 U	0.0451 U	0.0392 U	0.0451 UT
C430	LW2-C430-B	0.418 J	0.315 NJ	0.0253 U	0.241 NJ	0.456 NJ	1.43 JT
C430	LW2-C430-C	1.26 NJ	0.459 NJ	0.0252 U	0.316 J	0.0507 U	2.04 JT
C430	LW2-C430-E	1.64 NJ	1.27 NJ	0.113 U	0.261 U	0.228 U	2.91 JT
C431	LW2-C431-B	1.97 J	1.75 NJ	0.124 U	0.287 U	1.9 NJ	5.62 JT
C431	LW2-C431-C	4.59 J	3.15	0.104 U	0.241 U	3.46 NJ	11.2 JT
C431	LW2-C431-D	0.326 J	0.214 J	0.0193 U	0.0446 U	0.0389 U	0.54 JT
C434	LW2-C434-B	2.08 NJ	0.639 J	0.122 U	0.283 U	0.246 U	2.72 JT
C434	LW2-C434-C	0.036 UJ	0.0228 UJ	0.0195 U	0.0451 UJ	0.0393 UJ	0.0451 UJT
C434	LW2-C434-D	0.0346 UJ	0.038 J	0.0187 U	0.0433 UJ	0.0377 UJ	0.038 JT
C437	LW2-C437-B	0.171 U	0.108 U	0.0926 U	0.214 U	0.186 U	0.214 UT
C437	LW2-C437-C	0.034 U	0.0215 U	0.0184 U	0.401 NJ	0.151	0.552 JT
C437	LW2-C437-D	0.0366 U	0.0231 U	0.0198 U	0.0459 U	0.0399 U	0.0459 UT
C439	LW2-C439-B	0.249 U	0.455 J	0.135 UJ	0.312 U	0.272 UJ	0.455 JT
C439	LW2-C439-C	0.216 UJ	0.492 NJ	0.117 UJ	0.27 UJ	0.235 UJ	0.492 JT
C441-1	LW2-C441-B1	0.921 J	0.837 J	0.118 UJ	0.422 J	0.238 UJ	2.18 JT
C441-1	LW2-C441-C1	0.0358 U	0.0226 U	0.0194 UJ	0.0448 U	0.039 UJ	0.0448 UT
C441-2	LW2-C441-B2	2.83 JT	4.28 JT	0.122 UJT	0.939 JT	2.03 NJT	10.1 JT
C441-2	LW2-C441-C2	0.0391 UT	0.0247 UT	0.0212 UJT	0.049 UT	0.0426 UJT	0.049 UT
C444	LW2-C444-B	2.73 J	1.44 NJ	0.0309 UJ	0.562 NJ	1.68 NJ	6.41 JT
C444	LW2-C444-C	1.16 J	0.334 NJ	0.121 U	0.28 U	0.244 U	1.49 JT
C445	LW2-C445-B	0.547 J	0.672 J	0.0262 U	0.259 J	0.363 J	1.84 JT
C445	LW2-C445-C	1.19 J	1.56 NJ	0.126 U	0.291 UJ	0.253 UJ	2.75 JT
C445	LW2-C445-E	0.226 UJ	0.572 J	0.123 U	0.283 UJ	0.247 UJ	0.572 JT
C450	LW2-C450-B	1.84 J	1.96 J	1.54 J	0.372 NJ	2.14 NJ	7.85 JT
C450	LW2-C450-C	20.1 J	24.7 NJ	0.254 U	3.83 NJ	17.6 NJ	66.2 JT
C453	LW2-C453-B	32.3 J	37.3 J	0.258 U	4.36 J	46.2 NJ	120 JT
C453	LW2-C453-C	16.8	27.7 J	0.246 U	1.77 J	38 NJ	84.3 JT
C453	LW2-C453-D	0.108 NJ	0.163 NJ	0.0234 U	0.071 NJ	0.0472 U	0.342 JT
C454	LW2-C454-B	0.0326 U	0.042 NJ	0.0176 U	0.083 J	0.0355 U	0.125 JT
C454	LW2-C454-C	0.141 J	0.113 NJ	0.0259 U	0.327 NJ	0.0522 UJ	0.581 JT
C454	LW2-C454-D	0.156 J	0.126 J	0.0231 U	0.264 NJ	0.0465 U	0.546 JT
C454	LW2-C454-E	0.0351 U	0.0222 U	0.019 U	0.044 U	0.0383 U	0.044 UT
C455	LW2-C455-B	630 J	1140 J	2.57 U	80.2 J	480 J	2330 JT
C455	LW2-C455-C	32.7 J	63 J	0.121 U	2.96 J	9.16 J	108 JT
C455	LW2-C455-D	0.217 UJ	0.259 NJ	0.117 U	0.271 UJ	0.236 UJ	0.259 JT
C456	LW2-C456-B	1.03 J	0.779 NJ	0.0259 U	0.296 J	0.74 J	2.85 JT
C456	LW2-C456-C	3.28 J	3.16 NJ	0.105 U	0.569 J	3.06 NJ	10.1 JT
C456	LW2-C456-D	0.088 J	0.0281 U	0.0241 U	0.28 J	0.0485 U	0.368 JT
C456	LW2-C456-F	0.0431 U	0.0272 U	0.0233 U	0.054 U	0.047 U	0.054 UT
C457	LW2-C457-B	0.721	0.574 NJ	0.234 NJ	0.258 J	0.73 NJ	2.52 JT
C457	LW2-C457-C	1.2 J	0.709 NJ	1.22 NJ	0.553 NJ	1.62 NJ	5.3 JT
C457	LW2-C457-E	0.0432 UJ	0.0273 UJ	0.0234 UJ	0.0541 UJ	0.0471 UJ	0.0541 UJT
C458-1	LW2-C458-B	0.246 J	0.0346 U	0.0297 U	0.0687 U	0.0598 U	0.246 JT
C458-1	LW2-C458-C	0.54 J	0.307 NJ	0.0269 U	0.225 J	0.404 J	1.48 JT
C458-2	LW2-C458-B2	0.401 JT	0.481 JT	0.0275 UJT	0.19 JT	0.237 JT	1.31 JT

Table 4-7. *a* – Chlordane, *g* – Chlordane, Oxychlordane, *cis* – Nonachlor, and *trans* – Nonachlor Concentrations Used in Total Chlordane Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	5103-71-9	5103-74-2	27304-13-8	5103-73-1	39765-80-5	Total
	Chemical Name	cis-Chlordane	trans-Chlordane	Oxychlordane	cis-Nonachlor	trans-Nonachlor	Chlordanes
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID						
C458-2	LW2-C458-C2	0.609 JT	0.559 JT	0.0273 UT	0.245 JT	0.314 JT	1.73 JT
C461	LW2-C461-B	0.496 J	0.396 NJ	0.0292 UJ	0.0675 UJ	0.0588 UJ	0.892 JT
C461	LW2-C461-C	0.37 J	0.383 NJ	0.0258 UJ	0.191 J	0.052 UJ	0.944 JT
C468	LW2-C468-B	0.772 NJ	0.514 NJ	0.0256 U	0.219 J	0.661 NJ	2.17 JT
C468	LW2-C468-C	0.559	0.538 NJ	0.48 NJ	0.338 J	0.421 J	2.34 JT
C474	LW2-C474-B	0.309 J	0.171 NJ	0.0288 U	0.0666 U	0.058 U	0.48 JT
C474	LW2-C474-C	0.44 J	0.285 J	0.0254 U	0.0588 U	0.0512 U	0.725 JT
C477	LW2-C477-B	0.82 J	0.03 U	0.0257 U	0.552 J	0.6 NJ	1.97 JT
C477	LW2-C477-C	0.32 NJ	0.217 NJ	0.019 U	0.398 J	0.0382 U	0.935 JT
C494	LW2-C494-B	0.811 J	0.0242 U	0.0208 U	0.763 J	0.0418 U	1.57 JT
C494	LW2-C494-C	1.22 J	0.982 NJ	0.0217 U	0.628 J	0.0437 U	2.83 JT
C494	LW2-C494-D	0.977 J	1.22 NJ	0.116 U	1.43 NJ	0.618 J	4.25 JT
C494	LW2-C494-E	0.207 U	0.13 U	0.112 U	0.259 U	0.225 U	0.259 UT

Notes:

J The associated numerical value is an estimated quantity.

N Presumptive evidence of presence of material.

T The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

U The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Table 4-8. *m,p-* and *o-* Xylenes Concentrations Used in Total Xylenes Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	179601-23-1	95-47-6	Total
	Chemical Name	m,p-Xylene	o-Xylene	Xylenes
	Unit	ug/kg	ug/kg	ug/kg
Location	**Sample ID**			
Surface Interval Sediment Samples				
C093	LW2-C093-A	0.27 U	0.16 U	0.27 UT
G061	LW2-G061	0.26 U	0.15 U	0.26 UT
G062	LW2-G062	0.19 U	0.11 U	0.19 UT
G064	LW2-G064	0.21 U	0.12 U	0.21 UT
G067	LW2-G067	0.24 U	0.14 U	0.24 UT
G073	LW2-G073	0.19 U	0.11 U	0.19 UT
G074	LW2-G074	0.18 U	0.11 U	0.18 UT
G078	LW2-G078	0.18 U	0.11 U	0.18 UT
G079	LW2-G079	0.18 U	0.11 U	0.18 UT
G080	LW2-G080	0.19 U	0.11 U	0.19 UT
G082	LW2-G082	0.18 U	0.11 U	0.18 UT
G083	LW2-G083	0.23 U	0.13 U	0.23 UT
G084	LW2-G084	0.22 U	0.13 U	0.22 UT
G085	LW2-G085	0.31 J	0.66 J	0.97 JT
G086	LW2-G086	0.25 U	0.14 U	0.25 UT
G087	LW2-G087	0.24 U	0.14 U	0.24 UT
G088	LW2-G088	0.27 U	0.22 J	0.22 JT
G089	LW2-G089	0.18 U	0.11 U	0.18 UT
G090	LW2-G090	0.27 U	0.23 J	0.23 JT
G091	LW2-G091	0.44 J	0.36 J	0.8 JT
G092	LW2-G092	2.2	1.1 J	3.3 JT
G093	LW2-G093	0.25 U	0.19 U	0.25 UT
G094	LW2-G094	0.26 U	0.23 U	0.26 UT
G096	LW2-G096	0.2 U	0.12 U	0.2 UT
G099	LW2-G099	0.26 U	0.15 U	0.26 UT
G103	LW2-G103	0.23 U	0.13 U	0.23 UT
G106	LW2-G106	0.24 U	0.14 U	0.24 UT
G109	LW2-G109	0.26 U	0.15 U	0.26 UT
G111	LW2-G111	0.25 U	0.43 J	0.43 JT
G112	LW2-G112	0.28 U	0.16 U	0.28 UT
G115-1	LW2-G115-1	0.24 UT	0.14 UT	0.24 UT
G115-2	LW2-G115-2	0.25 U	0.15 U	0.25 UT
G116	LW2-G116	0.29 U	0.17 U	0.29 UT
G118	LW2-G118	0.26 U	0.15 U	0.26 UT
G121	LW2-G121	0.3 U	0.18 U	0.3 UT
G122	LW2-G122	0.29 U	0.17 U	0.29 UT
G123	LW2-G123	0.21 U	0.13 U	0.21 UT
G124	LW2-G124	0.19 U	0.11 U	0.19 UT
G126	LW2-G126	0.18 U	0.11 U	0.18 UT
G127	LW2-G127	0.27 UJ	0.16 UJ	0.27 UJT
G130	LW2-G130	0.22 UJ	0.13 UJ	0.22 UJT
G144	LW2-G144	0.32 U	0.19 U	0.32 UT
G145	LW2-G145	0.32 U	0.19 U	0.32 UT
G147	LW2-G147	0.2 UJ	0.12 UJ	0.2 UJT
G148	LW2-G148	0.29 U	0.17 U	0.29 UT
G150	LW2-G150	0.25 U	0.36 J	0.36 JT
G152	LW2-G152	0.28 U	0.16 U	0.28 UT
G156	LW2-G156	0.27 U	0.16 U	0.27 UT
G157	LW2-G157	0.18 U	0.11 U	0.18 UT
G158	LW2-G158	0.29 U	0.17 U	0.29 UT

Table 4-8. *m,p-* and *o-* Xylenes Concentrations Used in Total Xylenes Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	179601-23-1	95-47-6	Total
	Chemical Name	m,p-Xylene	o-Xylene	Xylenes
	Unit	ug/kg	ug/kg	ug/kg
Location	Sample ID			
G160	LW2-G160	0.19 U	0.11 U	0.19 UT
G161	LW2-G161	0.61 J	0.29 U	0.61 JT
G162	LW2-G162	0.3 U	0.17 U	0.3 UT
G163	LW2-G163	0.16 U	0.091 U	0.16 UT
G166	LW2-G166	0.2 U	0.12 U	0.2 UT
G169	LW2-G169	0.31 U	0.18 U	0.31 UT
G170	LW2-G170	0.22 U	1.4	1.4 T
G171	LW2-G171	0.32 U	0.19 U	0.32 UT
G172	LW2-G172	0.32 U	0.19 U	0.32 UT
G173	LW2-G173	0.34 U	0.2 U	0.34 UT
G174	LW2-G174	0.24 U	0.14 U	0.24 UT
G176	LW2-G176	0.18 U	0.11 U	0.18 UT
G177	LW2-G177	0.32 U	0.19 U	0.32 UT
G179	LW2-G179	0.22 J	0.46 J	0.68 JT
G184	LW2-G184	0.2 UJ	0.12 UJ	0.2 UJT
G185	LW2-G185	0.2 U	0.12 U	0.2 UT
G187	LW2-G187	0.2 UJ	0.12 UJ	0.2 UJT
G192	LW2-G192	0.26 U	0.15 U	0.26 UT
G196	LW2-G196	0.23 U	0.14 J	0.14 JT
G198	LW2-G198	0.24 U	0.14 U	0.24 UT
G199	LW2-G199	1.1	0.73 J	1.83 JT
G200	LW2-G200	0.42 U	0.12 U	0.42 UT
G202	LW2-G202	0.27 U	0.16 U	0.27 UT
G203-1	LW2-G203-1	0.29 UT	0.18 JT	0.18 JT
G203-2	LW2-G203-2	0.26 U	0.15 U	0.26 UT
G204	LW2-G204	0.21 U	0.12 U	0.21 UT
G205	LW2-G205	0.2 U	0.12 U	0.2 UT
G206	LW2-G206	0.24 U	0.14 U	0.24 UT
G207	LW2-G207	0.26 U	0.15 U	0.26 UT
G210	LW2-G210	0.23 U	0.14 U	0.23 UT
G212-1	LW2-G212-1	0.21 U	0.12 U	0.21 UT
G212-2	LW2-G212-2	0.22 U	0.13 U	0.22 UT
G215	LW2-G215	0.25 U	0.15 U	0.25 UT
G256	LW2-G256	0.2 U	0.12 U	0.2 UT
G263	LW2-G263	1.1	3.4	4.5 T
G264	LW2-G264	1 J	2.4	3.4 JT
G269	LW2-G269	0.26 U	0.23 U	0.26 UT
G270-1	LW2-G270-1	0.34 U	0.26 J	0.26 JT
G270-2	LW2-G270-2	0.3 U	0.27 J	0.27 JT
G273	LW2-G273	0.28 U	0.43 U	0.43 UT
G274	LW2-G274	0.51 J	0.38 J	0.89 JT
G276	LW2-G276	4.6	2.5	7.1 T
G278	LW2-G278	9.1	6.2	15.3 T
G283	LW2-G283	5.1	5.7	10.8 T
G284	LW2-G284	0.3 U	0.23 U	0.3 UT
G287	LW2-G287	0.21 U	0.23 J	0.23 JT
G288	LW2-G288	24	63	87 T

Table 4-8. *m,p-* and *o-* Xylenes Concentrations Used in Total Xylenes Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	179601-23-1	95-47-6	Total
	Chemical Name	m,p-Xylene	o-Xylene	Xylenes
	Unit	ug/kg	ug/kg	ug/kg
Location	Sample ID			
G289	LW2-G289	0.31 U	0.24 J	0.24 JT
G292	LW2-G292	0.35 J	0.48 U	0.35 JT
G294-1	LW2-G294-1	2.1	6.8	8.9 T
G294-2	LW2-G294-2	1.9 T	2.15 JT	4.05 JT
G297	LW2-G297	0.27 U	0.2 J	0.2 JT
G298	LW2-G298	100	170	270 T
G299	LW2-G299	1.1	0.4 J	1.5 JT
G300	LW2-G300	0.19 U	0.11 U	0.19 UT
G301	LW2-G301	0.25 U	0.15 U	0.25 UT
G302	LW2-G302	10	17	27 T
G305	LW2-G305	0.41 J	0.23 J	0.64 JT
G307	LW2-G307	0.24 U	0.14 U	0.24 UT
G309	LW2-G309	0.28 U	0.28 J	0.28 JT
G311-1	LW2-G311-1	0.25 UT	0.53 JT	0.53 JT
G311-2	LW2-G311-2	0.24 U	0.14 U	0.24 UT
G313	LW2-G313	0.24 U	0.14 U	0.24 UT
G314	LW2-G314	0.31 U	0.29 J	0.29 JT
G315	LW2-G315	0.23 U	0.14 U	0.23 UT
G316	LW2-G316	0.17 U	0.096 U	0.17 UT
G317	LW2-G317	0.21 U	0.12 U	0.21 UT
G321	LW2-G321	0.19 U	0.11 U	0.19 UT
G323	LW2-G323	0.18 U	0.1 U	0.18 UT
G324-1	LW2-G324-1	0.2 U	0.12 U	0.2 UT
G324-2	LW2-G324-2	0.19 U	0.11 U	0.19 UT
G325	LW2-G325	0.21 U	0.12 U	0.21 UT
G326	LW2-G326	0.19 U	0.11 U	0.19 UT
G327	LW2-G327	0.22 U	0.13 U	0.22 UT
G329	LW2-G329	0.18 U	0.099 U	0.18 UT
G330	LW2-G330	1.3	1.4	2.7 T
G331	LW2-G331	0.19 U	0.11 U	0.19 UT
G332	LW2-G332	3.5	2.7	6.2 T
G333	LW2-G333	0.22 U	0.13 U	0.22 UT
G334	LW2-G334	0.27 U	0.16 U	0.27 UT
G335	LW2-G335	0.19 U	0.11 U	0.19 UT
G348	LW2-G348	0.21 U	0.12 U	0.21 UT
G350	LW2-G350	0.26 U	0.15 U	0.26 UT
G353-1	LW2-G353-1	0.26 U	0.15 U	0.26 UT
G353-2	LW2-G353-2	0.25 U	0.15 U	0.25 UT
G355	LW2-G355	0.23 U	0.18 J	0.18 JT
G356	LW2-G356	0.32 U	0.19 U	0.32 UT
G359	LW2-G359	0.31 U	0.18 U	0.31 UT
G360	LW2-G360	0.27 U	0.16 U	0.27 UT
G381	LW2-G381	0.24 U	0.14 U	0.24 UT
G403	LW2-G403	0.19 U	0.11 U	0.19 UT
G404	LW2-G404	0.28 U	0.16 U	0.28 UT
G439	LW2-G439	0.23 U	0.13 U	0.23 UT
G441	LW2-G441	0.25 U	0.14 U	0.25 UT
G444	LW2-G444	0.26 U	0.15 U	0.26 UT
G445	LW2-G445	0.22 U	0.13 U	0.22 UT
G521	LW2-G521	0.27 U	0.16 U	0.27 UT

Table 4-8. *m,p-* and *o-* Xylenes Concentrations Used in Total Xylenes Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	179601-23-1	95-47-6	Total
	Chemical Name	m,p-Xylene	o-Xylene	Xylenes
	Unit	ug/kg	ug/kg	ug/kg
Location	**Sample ID**			
Subsurface Sediment Samples				
C060	LW2-C060-B	0.22 U	0.14 U	0.22 UT
C060	LW2-C060-C	0.23 U	0.86 U	0.86 UT
C061	LW2-C061-B	0.18 U	0.11 U	0.18 UT
C061	LW2-C061-C	0.2 U	0.12 U	0.2 UT
C061	LW2-C061-E	0.18 U	0.11 U	0.18 UT
C062	LW2-C062-B	0.17 U	0.094 U	0.17 UT
C062	LW2-C062-C	0.59 U	0.33 U	0.59 UT
C062	LW2-C062-D	0.18 U	0.1 U	0.18 UT
C064	LW2-C064-B	0.22 U	0.13 U	0.22 UT
C064	LW2-C064-C	0.2 U	0.12 U	0.2 UT
C064	LW2-C064-G	0.21 U	0.12 U	0.21 UT
C067	LW2-C067-B	0.23 U	0.13 U	0.23 UT
C067	LW2-C067-D	0.23 U	0.23 U	0.23 UT
C067	LW2-C067-E	0.32 U	0.29 U	0.32 UT
C073	LW2-C073-B	0.18 U	0.1 U	0.18 UT
C073	LW2-C073-C	0.2 U	0.12 U	0.2 UT
C073	LW2-C073-D	0.18 U	0.11 U	0.18 UT
C074	LW2-C074-B	0.22 U	0.25 U	0.25 UT
C074	LW2-C074-C	0.32 U	0.11 U	0.32 UT
C074	LW2-C074-D	2	0.17 U	2 T
C074	LW2-C074-F	0.29 U	0.11 U	0.29 UT
C086	LW2-C086-B	0.24 U	0.14 U	0.24 UT
C086	LW2-C086-C	0.16 U	0.092 U	0.16 UT
C086	LW2-C086-D	0.15 U	0.086 U	0.15 UT
C093	LW2-C093-B	0.3 U	2	2 T
C093	LW2-C093-C	0.18 U	0.11 U	0.18 UT
C111-1	LW2-C111-B	0.23 U	0.13 U	0.23 UT
C111-1	LW2-C111-C	0.23 U	0.14 U	0.23 UT
C111-1	LW2-C111-F	0.19 U	0.12 U	0.19 UT
C111-2	LW2-C111-B2	0.23 U	0.14 U	0.23 UT
C111-2	LW2-C111-C2	0.23 U	0.24 U	0.24 UT
C111-2	LW2-C111-E2	0.22 U	0.25 U	0.25 UT
C112	LW2-C112-B	0.23 U	0.21 U	0.23 UT
C112	LW2-C112-C	0.23 U	0.14 U	0.23 UT
C112	LW2-C112-D	0.23 U	0.18 U	0.23 UT
C121	LW2-C121-B	0.23 U	0.14 J	0.14 JT
C121	LW2-C121-C	0.21 U	0.17 J	0.17 JT
C121	LW2-C121-D	0.18 U	0.11 U	0.18 UT
C122	LW2-C122-B	0.24 U	0.14 U	0.24 UT
C122	LW2-C122-C	0.21 U	0.18 U	0.21 UT
C144	LW2-C144-B	0.34 U	0.39 U	0.39 UT
C144	LW2-C144-D	0.19 U	0.13 U	0.19 UT
C144	LW2-C144-E	0.18 U	0.11 U	0.18 UT
C147	LW2-C147-B	0.24 U	0.32 U	0.32 UT
C147	LW2-C147-C	0.23 U	0.91 J	0.91 JT
C147	LW2-C147-E	0.31 U	1.8	1.8 T
C148	LW2-C148-B	0.24 U	0.14 U	0.24 UT
C148	LW2-C148-C	0.25 U	0.15 U	0.25 UT
C148	LW2-C148-E	0.21 U	0.12 U	0.21 UT
C152	LW2-C152-B	0.25 U	0.15 U	0.25 UT

Table 4-8. *m,p-* and *o-* Xylenes Concentrations Used in Total Xylenes Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	179601-23-1	95-47-6	Total
	Chemical Name	m,p-Xylene	o-Xylene	Xylenes
	Unit	ug/kg	ug/kg	ug/kg
Location	Sample ID			
C152	LW2-C152-C	0.24 U	0.14 U	0.24 UT
C152	LW2-C152-E	0.18 U	0.099 U	0.18 UT
C155	LW2-C155-B	0.22 U	0.13 U	0.22 UT
C155	LW2-C155-C	0.2 U	0.12 U	0.2 UT
C155	LW2-C155-D	0.19 U	0.11 U	0.19 UT
C156	LW2-C156-B	0.25 U	0.15 U	0.25 UT
C156	LW2-C156-C	0.23 U	0.18 U	0.23 UT
C156	LW2-C156-F	0.17 U	0.096 U	0.17 UT
C157	LW2-C157-B	0.22 U	0.13 U	0.22 UT
C157	LW2-C157-C	0.21 U	0.19 J	0.19 JT
C158	LW2-C158-B	0.34 U	0.36 U	0.36 UT
C158	LW2-C158-C	0.24 U	0.35 U	0.35 UT
C158	LW2-C158-D	0.19 U	0.11 U	0.19 UT
C158	LW2-C158-E	0.18 U	0.099 U	0.18 UT
C160	LW2-C160-B	0.22 U	0.13 U	0.22 UT
C160	LW2-C160-C	0.21 U	0.12 U	0.21 UT
C161	LW2-C161-B	0.21 U	0.13 U	0.21 UT
C161	LW2-C161-C	0.2 U	0.12 U	0.2 UT
C161	LW2-C161-D	0.19 U	0.11 U	0.19 UT
C162	LW2-C162-B	0.25 U	0.15 U	0.25 UT
C162	LW2-C162-C	0.22 U	0.34 U	0.34 UT
C162	LW2-C162-D	0.17 U	0.098 U	0.17 UT
C163-1	LW2-C163-B1	0.16 U	0.091 U	0.16 UT
C163-1	LW2-C163-C1	0.2 U	0.12 U	0.2 UT
C163-1	LW2-C163-D1	0.19 U	0.11 U	0.19 UT
C163-2	LW2-C163-B2	0.16 UT	0.091 UT	0.16 UT
C163-2	LW2-C163-C2	0.2 UT	0.12 UT	0.2 UT
C163-2	LW2-C163-D2	0.19 UT	0.11 UT	0.19 UT
C166	LW2-C166-B	0.19 U	0.12 U	0.19 UT
C166	LW2-C166-C	0.45 U	0.26 U	0.45 UT
C166	LW2-C166-D	0.21 U	0.52 U	0.52 UT
C169	LW2-C169-B	0.26 U	0.15 U	0.26 UT
C169	LW2-C169-C	0.23 U	0.13 J	0.13 JT
C169	LW2-C169-D	0.2 U	0.12 U	0.2 UT
C170	LW2-C170-B	0.2 U	0.12 U	0.2 UT
C170	LW2-C170-C	0.17 U	0.099 U	0.17 UT
C170	LW2-C170-D	0.17 U	0.097 U	0.17 UT
C171	LW2-C171-B	0.25 U	0.16 J	0.16 JT
C171	LW2-C171-C	0.21 U	0.19 J	0.19 JT
C171	LW2-C171-D	0.19 U	0.11 U	0.19 UT
C172	LW2-C172-B	0.23 U	0.14 U	0.23 UT
C172	LW2-C172-C	0.22 U	0.13 U	0.22 UT
C172	LW2-C172-E	0.18 U	0.25 U	0.25 UT
C173	LW2-C173-B	0.26 U	0.15 U	0.26 UT
C173	LW2-C173-C	0.24 U	0.15 J	0.15 JT
C173	LW2-C173-E	0.18 U	0.11 U	0.18 UT
C176	LW2-C176-B	0.25 U	0.15 U	0.25 UT
C176	LW2-C176-C	0.2 U	0.12 U	0.2 UT
C176	LW2-C176-G	0.18 U	0.1 U	0.18 UT
C179	LW2-C179-B	0.23 U	0.64 U	0.64 UT
C179	LW2-C179-C	0.28 J	0.42 U	0.28 JT

Table 4-8. *m,p-* and *o-* Xylenes Concentrations Used in Total Xylenes Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	179601-23-1	95-47-6	Total
	Chemical Name	m,p-Xylene	o-Xylene	Xylenes
	Unit	ug/kg	ug/kg	ug/kg
Location	Sample ID			
C179	LW2-C179-D	0.21 J	0.28 U	0.21 JT
C184	LW2-C184-B	0.24 U	0.19 J	0.19 JT
C184	LW2-C184-C	0.23 J	0.41 J	0.64 JT
C184	LW2-C184-D	0.21 U	0.12 U	0.21 UT
C184	LW2-C184-E	0.19 U	0.11 U	0.19 UT
C185	LW2-C185-B	0.22 U	0.89 J	0.89 JT
C185	LW2-C185-C	0.21 U	0.71 J	0.71 JT
C185	LW2-C185-D	0.18 U	0.11 U	0.18 UT
C192	LW2-C192-B	0.22 U	0.13 U	0.22 UT
C192	LW2-C192-C	0.57 U	0.9 J	0.9 JT
C192	LW2-C192-D	0.19 U	0.099 U	0.19 UT
C196	LW2-C196-B	0.18 U	0.099 U	0.18 UT
C196	LW2-C196-C	0.17 U	0.099 U	0.17 UT
C199	LW2-C199-B	0.21 U	0.12 U	0.21 UT
C199	LW2-C199-C	0.19 U	0.11 U	0.19 UT
C199	LW2-C199-E	0.18 U	0.11 U	0.18 UT
C202	LW2-C202-B	0.25 U	1.7	1.7 T
C202	LW2-C202-C	0.23 U	0.52 U	0.52 UT
C202	LW2-C202-D	0.17 U	0.093 U	0.17 UT
C203	LW2-C203-B	0.23 U	0.18 J	0.18 JT
C203	LW2-C203-C	0.21 U	0.12 U	0.21 UT
C203	LW2-C203-E	0.19 U	0.43 J	0.43 JT
C206	LW2-C206-B	0.26 U	0.62 J	0.62 JT
C206	LW2-C206-C	0.16 U	0.092 U	0.16 UT
C206	LW2-C206-D	0.16 U	0.09 U	0.16 UT
C207-1	LW2-C207-B	0.24 U	0.55 U	0.55 UT
C207-1	LW2-C207-C	0.2 U	0.35 U	0.35 UT
C207-1	LW2-C207-D	0.21 U	0.12 U	0.21 UT
C207-2	LW2-C207-B2	0.24 UT	0.31 UT	0.31 UT
C207-2	LW2-C207-C2	0.2 UT	0.12 UT	0.2 UT
C210	LW2-C210-B	0.3 J	0.35 J	0.65 JT
C210	LW2-C210-C	0.44 J	0.48 J	0.92 JT
C210	LW2-C210-E	0.19 U	0.11 U	0.19 UT
C213	LW2-C213-B	0.17 U	0.094 U	0.17 UT
C213	LW2-C213-C	0.18 U	0.11 U	0.18 UT
C213	LW2-C213-D	0.18 U	0.11 U	0.18 UT
C215	LW2-C215-B	0.17 U	0.094 U	0.17 UT
C215	LW2-C215-C	0.17 U	0.097 U	0.17 UT
C263	LW2-C263-B	15	10	25 T
C263	LW2-C263-C	93 J	340	433 JT
C263	LW2-C263-D	3.6	8	11.6 T
C264	LW2-C264-B	510	280	790 T
C264	LW2-C264-C	0.19 U	0.17 J	0.17 JT
C264	LW2-C264-D	0.18 U	0.11 U	0.18 UT
C269	LW2-C269-B	0.34 U	2.1 U	2.1 UT
C269	LW2-C269-C	0.24 U	4.7 U	4.7 UT
C269	LW2-C269-F	0.92 U	2.2	2.2 T
C270	LW2-C270-B	1.1	5.1	6.2 T
C270	LW2-C270-C	0.93 J	2.6	3.53 JT
C273	LW2-C273-B	180	150	330 T
C273	LW2-C273-C	4.6	9.7	14.3 T

Table 4-8. *m,p-* and *o-* Xylenes Concentrations Used in Total Xylenes Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	179601-23-1		95-47-6		Total	
	Chemical Name	m,p-Xylene		o-Xylene		Xylenes	
	Unit	ug/kg		ug/kg		ug/kg	
Location	Sample ID						
C273	LW2-C273-D	0.23	U	0.13	U	0.23	UT
C276	LW2-C276-B	16		24		40	T
C276	LW2-C276-C	47000		21000		68000	T
C276	LW2-C276-D	1.6		1.7		3.3	T
C278	LW2-C278-B	36	U	31	J	31	JT
C278	LW2-C278-C	53	J	210		263	JT
C278	LW2-C278-D	0.18	U	0.11	U	0.18	UT
C283	LW2-C283-B	600	J	2500		3100	JT
C283	LW2-C283-C	82		150		232	T
C283	LW2-C283-E	0.18	U	0.11	U	0.18	UT
C284	LW2-C284-B	460		330		790	T
C284	LW2-C284-C	34000		15000		49000	T
C284	LW2-C284-D	24	U	11	U	24	UT
C284	LW2-C284-E	0.8	J	0.96		1.76	JT
C288	LW2-C288-B	4.8		14		18.8	T
C288	LW2-C288-C	1.8		2.7		4.5	T
C288	LW2-C288-D	0.78	J	0.88		1.66	JT
C289	LW2-C289-B	1.8		3.5		5.3	T
C289	LW2-C289-C	9.5		35		44.5	T
C289	LW2-C289-E	0.18	U	0.11	U	0.18	UT
C294	LW2-C294-B	3000	J	4200		7200	JT
C294	LW2-C294-C	2		3.7		5.7	T
C294	LW2-C294-D	0.2	U	0.12	U	0.2	UT
C299	LW2-C299-B	7200		3800	J	11000	JT
C299	LW2-C299-C	2600		1300		3900	T
C3002	LW2-C300-B	0.24	U	0.18	U	0.24	UT
C3002	LW2-C300-C	0.23	U	0.19	U	0.23	UT
C3002	LW2-C300-D	0.25	U	0.14	U	0.25	UT
C301	LW2-C301-B	1900		2400		4300	T
C301	LW2-C301-C	99000		48000		147000	T
C301	LW2-C301-D	32000		14000		46000	T
C301	LW2-C301-E	200000		80000		280000	T
C301	LW2-C301-G	20000		7400		27400	T
C302	LW2-C302-B	490		540		1030	T
C302	LW2-C302-C	51000		27000		78000	T
C302	LW2-C302-D	19000		9800		28800	T
C305-1	LW2-C305-B1	34	U	77	J	77	JT
C305-1	LW2-C305-C1	0.78	J	1.1		1.88	JT
C305-1	LW2-C305-D1	0.18	U	0.1	U	0.18	UT
C305-2	LW2-C305-B2	270		740		1010	T
C305-2	LW2-C305-C2	25		61		86	T
C305-2	LW2-C305-D2	0.17	U	0.097	U	0.17	UT
C311	LW2-C311-B	0.24	U	0.45	U	0.45	UT
C311	LW2-C311-C	0.96		0.98	U	0.96	T
C311	LW2-C311-E	0.21	U	0.23	U	0.23	UT
C313	LW2-C313-B	0.18	U	0.11	U	0.18	UT
C313	LW2-C313-C	0.19	U	0.11	U	0.19	UT
C314	LW2-C314-B	0.26	U	0.15	U	0.26	UT
C314	LW2-C314-C	0.24	U	0.14	U	0.24	UT
C314	LW2-C314-D	0.19	U	0.11	U	0.19	UT
C316	LW2-C316-B	31	U	13	U	31	UT

Table 4-8. *m,p-* and *o-* Xylenes Concentrations Used in Total Xylenes Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	179601-23-1	95-47-6	Total
	Chemical Name	m,p-Xylene	o-Xylene	Xylenes
	Unit	ug/kg	ug/kg	ug/kg
Location	Sample ID			
C316	LW2-C316-C	0.55 U	0.62 U	0.62 UT
C316	LW2-C316-D	3.3	16	19.3 T
C323	LW2-C323-B	0.2 U	0.12 U	0.2 UT
C323	LW2-C323-C	0.18 U	0.21 U	0.21 UT
C323	LW2-C323-D	0.17 U	0.099 U	0.17 UT
C323	LW2-C323-E	0.19 U	0.17 U	0.19 UT
C324	LW2-C324-B	0.23 U	0.22 U	0.23 UT
C324	LW2-C324-D	0.73 U	0.31 U	0.73 UT
C324	LW2-C324-E	0.2 U	0.25 U	0.25 UT
C326	LW2-C326-B	0.23 U	0.13 U	0.23 UT
C326	LW2-C326-C	0.17 U	0.3 U	0.3 UT
C326	LW2-C326-D	0.18 U	0.099 U	0.18 UT
C327	LW2-C327-B	0.18 U	0.099 U	0.18 UT
C327	LW2-C327-C	0.18 U	0.11 U	0.18 UT
C327	LW2-C327-D	0.18 U	0.11 U	0.18 UT
C329	LW2-C329-B	0.19 U	0.11 J	0.11 JT
C329	LW2-C329-C	1.8	2.6	4.4 T
C329	LW2-C329-D	0.24 J	0.32 J	0.56 JT
C331	LW2-C331-B	0.19 U	0.14 U	0.19 UT
C331	LW2-C331-C	0.18 U	0.11 U	0.18 UT
C331	LW2-C331-D	0.19 U	0.11 U	0.19 UT
C331	LW2-C331-E	0.2 U	0.12 U	0.2 UT
C331	LW2-C331-G	0.17 U	0.098 U	0.17 UT
C332	LW2-C332-B	1.1	1.2	2.3 T
C332	LW2-C332-C	0.17 U	0.097 U	0.17 UT
C332	LW2-C332-D	0.16 U	0.092 U	0.16 UT
C333	LW2-C333-B	0.19 U	0.11 U	0.19 UT
C333	LW2-C333-C	0.18 U	0.099 U	0.18 UT
C333	LW2-C333-E	0.19 U	0.11 U	0.19 UT
C333	LW2-C333-G	0.17 U	0.097 U	0.17 UT
C334	LW2-C334-B	31	32	63 T
C334	LW2-C334-C	0.27 U	0.097 U	0.27 UT
C334	LW2-C334-D	0.19 U	0.11 U	0.19 UT
C335	LW2-C335-B	0.46 U	0.28 U	0.46 UT
C335	LW2-C335-C	14	4.6	18.6 T
C335	LW2-C335-E	0.19 U	0.11 U	0.19 UT
C348	LW2-C348-B	0.26 U	0.27 U	0.27 UT
C348	LW2-C348-C	0.41 U	0.6 U	0.6 UT
C348	LW2-C348-D	0.37 U	0.33 U	0.37 UT
C356	LW2-C356-B	1.4	0.72 U	1.4 T
C356	LW2-C356-C	2.4	0.5 U	2.4 T
C356	LW2-C356-E	0.24 U	0.16 U	0.24 UT
C359	LW2-C359-B	0.34 J	0.4 U	0.34 JT
C359	LW2-C359-C	0.24 J	0.36 U	0.24 JT
C359	LW2-C359-D	1	0.71 J	1.71 JT
C403	LW2-C403-B	0.19 U	0.17 U	0.19 UT
C403	LW2-C403-C	0.2 U	0.17 U	0.2 UT
C403	LW2-C403-D	0.2 U	0.12 U	0.2 UT
C403	LW2-C403-F	0.22 U	0.13 U	0.22 UT
C439	LW2-C439-B	0.24 U	0.14 U	0.24 UT
C439	LW2-C439-C	0.22 U	0.13 U	0.22 UT

Table 4-8. *m,p-* and *o-* Xylenes Concentrations Used in Total Xylenes Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	179601-23-1	95-47-6	Total
	Chemical Name	m,p-Xylene	o-Xylene	Xylenes
	Unit	ug/kg	ug/kg	ug/kg
Location	**Sample ID**			
C439	LW2-C439-E	0.18 U	0.11 U	0.18 UT
C441-1	LW2-C441-B1	0.24 U	0.14 U	0.24 UT
C441-1	LW2-C441-C1	0.19 U	0.11 U	0.19 UT
C441-1	LW2-C441-D1	0.19 U	0.11 U	0.19 UT
C441-2	LW2-C441-B2	0.24 UT	0.14 UT	0.24 UT
C441-2	LW2-C441-C2	0.19 UT	0.11 UT	0.19 UT
C441-2	LW2-C441-D2	0.18 UT	0.11 UT	0.18 UT
C444	LW2-C444-B	0.26 U	0.15 U	0.26 UT
C444	LW2-C444-C	0.22 U	0.13 U	0.22 UT
C444	LW2-C444-E	0.19 U	0.11 U	0.19 UT
C445	LW2-C445-B	0.24 U	0.14 U	0.24 UT
C445	LW2-C445-C	0.23 U	0.27 U	0.27 UT
C445	LW2-C445-E	0.22 U	0.13 U	0.22 UT
C521	LW2-C521-B	1600	780	2380 T
C521	LW2-C521-C	24000	11000	35000 T
C521	LW2-C521-E	0.29 U	0.24 U	0.29 UT

Notes:

J The associated numerical value is an estimated quantity.

T The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

U The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
Beach Sediment Samples									
B001	LW2-B001	0.86 J	0.21 U	1.8 J	1.4 J	0.4 J	1.9 U	1.7 J	6.16 JT
B002	LW2-B002	0.7 J	0.2 U	1.6 J	0.63 J	0.24 U	1.7 U	1.7 J	4.63 JT
B003	LW2-B003	8.3	32	40	29	6.5	23	98	237 T
B004	LW2-B004	2 J	1.6 J	9.3	5.9	1.5 J	5.6	12	37.9 JT
B005	LW2-B005	3.7	2.3 J	16	10	2.3 J	11	21	66.3 JT
B006	LW2-B006	0.51 J	0.24 J	0.75 J	0.68 J	0.33 J	1.3 U	2.3 J	4.81 JT
B007	LW2-B007	1.9 J	4.6	9.1	8.6	2.6	4.3 U	22	48.8 JT
B008	LW2-B008	0.79 J	0.18 U	1 J	0.56 J	0.21 U	1.6 U	1.7 J	4.05 JT
B009	LW2-B009	0.87 J	1.6 J	0.73 J	1 J	1 J	2.2 U	6.7	11.9 JT
B010	LW2-B010	12	65	9.8	72	28	26	390	603 T
B011	LW2-B011	0.52 J	0.18 U	0.57 J	0.24 U	0.21 U	1.3 U	0.53 J	1.62 JT
B012	LW2-B012	2.2 J	1.4 J	11	8.9	2.5	6.8	38	70.8 JT
B015	LW2-B015	18	3	25	36	6.7	38	110	237 T
B016	LW2-B016	210	600	1100	1300	340	590	4500	8640 T
B017	LW2-B017	1 J	0.2 U	2.1 J	1.1 J	0.31 J	2.1 U	1.1 J	5.61 JT
B018	LW2-B018	0.62 J	0.21 J	1 J	1.3 J	0.22 U	1.7 U	2.9	6.03 JT
B019	LW2-B019	0.41 U	0.2 U	0.27 U	0.64 J	0.23 U	1.1 U	1.1 J	1.74 JT
B020	LW2-B020	2.3 J	2.1 J	1.9 J	3	1.8 J	7.5	15	33.6 JT
B021	LW2-B021	1.5 J	0.72 J	1 J	1.8 J	1.1 J	3.7 U	7.7	13.8 JT
B022-1	LW2-B022-1	13	120	34	220	59	29	800	1280 T
B022-2	LW2-B022-2	4.8	12	7.3	32	10	8.9	110	185 T
B023	LW2-B023	0.73 J	0.23 J	1.6 J	1.3 J	0.28 J	1.7 U	2.9	7.04 JT
B024	LW2-B024	1.4 J	1.2 J	2.2 J	3.7	1.1 J	2.4 U	10	19.6 JT
B025-1	LW2-B025-1	0.84 JT	1.6 JT	1.03 JT	1.45 JT	0.815 JT	2.2 UT	2.65 JT	8.39 JT
B025-2	LW2-B025-2	0.69 J	2.6	1.1 J	2.1 J	1.5 J	2.1 U	6	14 JT
B026	LW2-B026	3.4	4.8	42	34	7.7	6.5	180	278 T
B050	LW2-B050	0.39 U	0.82 J	1.9	3.5	0.77 J	0.73 U	14	21 JT
Surface Interval Sediment Samples									
C093	LW2-C093-A	42	110	270	480	100	67	620	1690 T
D1-1	LW2-D1-1	1.7 JT	1.4 JT	3.4 T	5.4 T	1.2 JT	5.7 T	10 T	28.8 JT
D1-2	LW2-D1-2	1.8 J	1.9 J	2.9	3.4	1.6 J	5.2	10	26.8 JT
D2	LW2-D2	2.6 U	4.6	13	9.4	2.9	7.8 U	31	60.9 T
G001	LW2-G001	2.3 J	2.7 J	3.5	6.2	2 J	8.1	17	41.8 JT
G002	LW2-G002	4.5	13	5.3	9.5	11	10	140	193 T
G003	LW2-G003	2.7 J	2.9	4.9	6.9	2.6 J	9.9	23	52.9 JT
G004	LW2-G004	1.8 J	1.8 J	3.5	4.4	1.6 J	5.4 U	13	26.1 JT
G005	LW2-G005	2.4 J	2.2 J	3.3	7.1	1.8 J	8.9	12	37.7 JT

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G006	LW2-G006	2 J	1.7 J	2.4 J	5	1.7 J	7.1 U	14	26.8 JT
G007-1	LW2-G007-1	5.75 T	8.35 T	5.5 T	13 T	6.45 T	17 T	51.5 T	108 T
G007-2	LW2-G007-2	3.8	3.5	4.3	6.1	3.1	13	18	51.8 T
G008	LW2-G008	2.9 J	2.4 J	3.6	5.4	2.7 J	10	18	45 JT
G009	LW2-G009	5.5	8.1	9.7	12	4.4	13	51	104 T
G010	LW2-G010	4.9	4.1	6.7	9.4	5.1	12	34	76.2 T
G011	LW2-G011	7.5	8.8	16	34	12	17	140	235 T
G012	LW2-G012	4	4.6	5.5	9.2	4.2	12	32	71.5 T
G013	LW2-G013	3.9	4.7	5.5	9.4	5.6	12	39	80.1 T
G014	LW2-G014	1.9 J	2.3 J	2 J	3.3 J	1.6 J	6.3 U	10	21.1 JT
G015	LW2-G015	9.6	9.7	36	28	8.9	31	95	218 T
G016	LW2-G016	2 J	2.6 J	3.4 J	7	2.6 J	7.3 U	18	35.6 JT
G017	LW2-G017	8.5	8.2	19	34	12	20	77	179 T
G018	LW2-G018	3.9	3.5	5.4	6.8	3.4	14	22	59 T
G019	LW2-G019	6.8	4.9	12	12	4.6	14	33	87.3 T
G020	LW2-G020	10	18	10	26	19	13	180	276 T
G021	LW2-G021	1.4 J	1.4 J	1.9 J	5.2	1.4 J	4.7 U	25	36.3 JT
G022	LW2-G022	2.4 J	2.6 J	2.9 J	7.6	2.1 J	8.2 U	16	33.6 JT
G023-1	LW2-G023-1	1.9 JT	1.6 JT	7.85 T	5.55 T	1.5 JT	6 UT	14.5 T	32.9 JT
G023-2	LW2-G023-2	0.85 J	0.8 J	1.5 J	0.98 J	0.47 J	2.9 U	3.8	8.4 JT
G024	LW2-G024	54	98	12	73	49	87	360	733 T
G025	LW2-G025	7.9	13	11	25	17	16	170	260 T
G026	LW2-G026	3.3	3.4	4.5	8.3	4.3	8.8	23	55.6 T
G027	LW2-G027	1.3 J	0.86 J	1.6 J	2.1 J	0.69 J	3.3 U	5.5	12.1 JT
G028	LW2-G028	3	7	7	8.3	5	9.5 U	33	63.3 T
G029	LW2-G029	88	210	65	65	110	160	770	1470 T
G030	LW2-G030	3.2 J	3.7	3.9	6.5	3.1 J	11 U	21	41.4 JT
G031	LW2-G031	2.1 J	3.4	5.1	9.5	3.4	6.5 U	23	46.5 JT
G032	LW2-G032	4.7	25	10	25	35	10 U	630	730 T
G033	LW2-G033	5.6	360	4.7	8.1	6	11	35	430 T
G034	LW2-G034	1.2 J	0.85 J	3	5.9	0.63 J	3.2	7.8	22.6 JT
G035	LW2-G035	12	15	7.7	17	14	17	92	175 T
G036	LW2-G036	3.9	7.8	7.5	14	5	13 U	43	81.2 T
G037	LW2-G037	0.92 J	0.49 J	2.7	3.1	0.69 J	2.9 U	11	18.9 JT
G038	LW2-G038	5.2	46	3.2	13	4.7	22	110	204 T
G039	LW2-G039	3.1 J	3.3	5.1	10	3.2 J	11 U	25	49.7 JT
G040	LW2-G040	3.8	3.1	6.7	6.6	2.3 J	11	21	54.5 JT
G041	LW2-G041	77	120	110	94	110	140	1000	1650 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G042	LW2-G042	6.1	4.1	3.4	5.8	3.9	21	20	64.3 T
G043	LW2-G043	11	9.9	8	14	9.9	26	61	140 T
G044-1	LW2-G044-1	12.8 T	9.2 T	10.9 T	44.5 T	10.5 T	25.5 T	60 T	173 T
G044-2	LW2-G044-2	13	6.5	18	38	9.4	21	53	159 T
G045	LW2-G045	5.7	3.3	41	24	3.3	17	38	132 T
G046	LW2-G046	5.2	7.8	6.5	14	7.4	13	43	96.9 T
G047	LW2-G047	5.8	12	62	52	10	17	94	253 T
G048	LW2-G048	3.6	1.4 J	9.8	6.1	1.2 J	9.9 U	9.3	31.4 JT
G049	LW2-G049	1.2 J	0.92 J	9.4	4.8	0.95 J	4.4 U	8.3	25.6 JT
G050	LW2-G050	14	28	13	30	25	22	140	272 T
G051	LW2-G051	4.7	4.4	5.2	9.6	4.1	12 U	26	54 T
G052	LW2-G052	3.7	5.3	30	18	3.8	15	29	105 T
G053	LW2-G053	0.62 J	0.23 U	0.5 J	0.35 J	0.27 U	0.99 U	1.4 J	2.87 JT
G054	LW2-G054	7	4.2 J	23	14	3.8 J	24	39	115 JT
G055	LW2-G055	1.9 J	3.3	3.5	6.6	2.1 J	5.1 U	24	41.4 JT
G056	LW2-G056	52	40	36	38	27	310	150	653 T
G057	LW2-G057	22	56	45	68	27	57	210	485 T
G058	LW2-G058	3.6	2.6	3.7	6	3	8.8	17	44.7 T
G059	LW2-G059	0.77 J	3.5	2.6	2.9	1.3 J	2.4 U	13	24.1 JT
G060	LW2-G060	21	19	30	33	15	57	160	335 T
G061	LW2-G061	7	25	8.2	20	17	14	96	187 T
G062	LW2-G062	4	3.2	7.7	13	4.3	8.7	44	84.9 T
G063	LW2-G063	3.9	5.6	8.5	11	3.8	12	40	84.8 T
G064	LW2-G064	27	23	55	60	22	73	260	520 T
G065	LW2-G065	7.9	8	13	24	9.1	18	160	240 T
G066	LW2-G066	6.7	6.8	14	15	6	15	58	122 T
G067	LW2-G067	42	70	6	26	76	19	260	499 T
G068	LW2-G068	18	30	19	53	36	21	120	297 T
G069	LW2-G069	12	44	48	100	22	32	280	538 T
G070	LW2-G070	10	9.5	8.2	16	9.6	23	67	143 T
G071	LW2-G071	1.7 J	2.5	8.2	9.4	2 J	5.2 U	28	51.8 JT
G072	LW2-G072	3	4.4	5.7	8	3.3	9.3 U	40	64.4 T
G073	LW2-G073	1 J	0.87 J	0.66 J	1.1 J	0.45 J	0.51 U	3.7	7.78 JT
G074	LW2-G074	1.2 J	0.7 J	0.59 J	1.1 J	0.69 J	0.48 U	3.6	7.88 JT
G075-1	LW2-G075-1	1.4 J	1.3 J	2 J	2.8	1.2 J	4.4 U	7.8	16.5 JT
G075-2	LW2-G075-2	1.8 J	1.4 J	2.7	4.7	1.5 J	5.1 U	13	25.1 JT
G076	LW2-G076	5.9	6.5	7.6	12	5.3	13	42	92.3 T
G077	LW2-G077	3.2	3.3	4.1	7.3	3	9.3	24	54.2 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G078	LW2-G078	0.6 J	0.22 J	0.54 J	0.7 J	0.26 U	0.48 U	1.9 J	3.96 JT
G079	LW2-G079	0.79 J	0.33 J	0.89 J	0.71 J	0.59 J	2.8	2.7	8.81 JT
G080	LW2-G080	1.3 J	5.4	1.4 J	6.1	1.5 J	0.49 U	240	256 JT
G081	LW2-G081	3.6	5.6	7.7	9.6	3.5	10	26	66 T
G082	LW2-G082	1.8 J	1.4 J	1.6 J	2.8	0.89 J	0.49 U	8.5	17 JT
G083	LW2-G083	5.5	3.8	5	11	5.3	12	41	83.6 T
G084	LW2-G084	2.3 J	3.1	3	8.1	2.6	0.58 U	26	45.1 JT
G085	LW2-G085	29	160	32	890	320	44	1700	3180 T
G086	LW2-G086	9.2	4.3	4	9.3	5.7	16	34	82.5 T
G087	LW2-G087	3.1	2.4 J	4.5	6.3	2.8	0.63 U	22	41.1 JT
G088	LW2-G088	10	7.7	13	20	8.7	22	54	135 T
G089	LW2-G089	2.2 J	670	3.3	420	420	0.48 U	1100	2620 JT
G090	LW2-G090	4.4	4.9	3.1	9.9	5.4	9.7	35	72.4 T
G091	LW2-G091	8.2	5.9	9.3	26	7.7	14	55	126 T
G092	LW2-G092	44	220	18	2200	730	32	5100	8340 T
G093	LW2-G093	16	59	19	420	110	34	830	1490 T
G094	LW2-G094	15	76	24	170	87	20	800	1190 T
G095	LW2-G095	4	6.6	11	11	5.5	8.2	38	84.3 T
G096	LW2-G096	6.7	19	7.7	16	8.1	19	44	121 T
G097	LW2-G097	12	27	26	26	17	35	110	253 T
G098	LW2-G098	5.2	4.7	4.9	8.6	4	23	30	80.4 T
G099	LW2-G099	4.3	5.4	5.8	18	4.8	6.9	49	94.2 T
G100	LW2-G100	65	150	42	77	89	120	950	1490 T
G101	LW2-G101	12	21	14	23	14	31	110	225 T
G102	LW2-G102	5.8	30	48	68	16	21	300	489 T
G103	LW2-G103	2.3 J	4.6	3.4	5.6	2.2 J	0.6 U	19	37.1 JT
G104	LW2-G104	4.7	8.7	12	14	5.2	13	46	104 T
G105	LW2-G105	140	150	100	180	130	370	1200	2270 T
G106	LW2-G106	6.2	6.4	4.2	13	6.2	9.4	47	92.4 T
G107	LW2-G107	7.3	8.7	15	14	5.4	27	48	125 T
G108	LW2-G108	2.6 J	4.1	4.1	5.8	2.5 J	5	18	42.1 JT
G109	LW2-G109	4.7	5.2	2.8	6.8	4.1	9.6	28	61.2 T
G110	LW2-G110	6.2	7.5	8.5	12	5.8	19	46	105 T
G111	LW2-G111	34	7.5	4.4	16	12	27	81	182 T
G112	LW2-G112	4.7	3.4	3.6	7.3	3.1	0.74 U	27	49.1 T
G113	LW2-G113	9.2	12	8.5	17	8.3	33	69	157 T
G114	LW2-G114	2.2 J	5.6	20	9.8	4.8	8.7	11	62.1 JT
G115-1	LW2-G115-1	5.3 T	20 T	24 T	23.5 T	8.3 T	19 T	86.5 T	187 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G115-2	LW2-G115-2	4.3	15	80	53	6.4	14	53	226 T
G116	LW2-G116	40	42	22	76	39	340	250	809 T
G117	LW2-G117	21	37	25	46	46	47	460	682 T
G118	LW2-G118	31	55	78	85	36	63	240	588 T
G119	LW2-G119	2.1 J	1.3 J	2.1 J	2.2 J	0.92 J	6.6 U	4.8	13.4 JT
G120	LW2-G120	6.4	8	7.5	22	6.5	14	80	144 T
G121	LW2-G121	17	29	16	37	28	39	160	326 T
G122	LW2-G122	29	51	35	95	50	75	320	655 T
G123	LW2-G123	0.84 J	6.3	0.75 U	0.45 J	0.37 J	0.57 U	2.8	10.8 JT
G124	LW2-G124	18	23	24	51	18	39	250 J	423 JT
G125	LW2-G125	2 J	2.5 J	3.8	6.1	1.8 J	7	16	39.2 JT
G126	LW2-G126	1.2 J	3.9	5.8	3.3	1.2 J	0.48 U	5.2	20.6 JT
G127	LW2-G127	21	58	150	130	34	78	400	871 T
G128	LW2-G128	5.1	8.4	27	17	5.9	13	46	122 T
G129	LW2-G129	2.6 J	3.5	7.4	9.4	3.1	9.5 U	28	54 JT
G130	LW2-G130	19	25	36	36	18	43	180	357 T
G131	LW2-G131	2.7 J	2.9 J	4.3 U	5.7	2.4 J	9.5 U	19	32.7 JT
G132	LW2-G132	27	41	34	39	29	53	210	433 T
G133	LW2-G133	8.4	16	19	30	14	20	110	217 T
G134	LW2-G134	9.1	12	17	30	8.5	26	72	175 T
G135	LW2-G135	7.2	8.4	8.4	130	14	13 U	100	268 T
G136	LW2-G136	8.5	29	15	30	30	16	220	349 T
G137	LW2-G137	6.1	6.9	10	19	5.5	17 U	48	95.5 T
G138	LW2-G138	5.5	27	6.7	46	39	12	760	896 T
G139	LW2-G139	49	390	71	890	310	90	3700	5500 T
G140-1	LW2-G140-1	35.5 T	230 T	29.5 T	69.5 T	122 T	85 T	485 T	1060 T
G140-1	LW2-G140-2	7.9	15	10	15	12	19	71	150 T
G141	LW2-G141	4.4	5.5	7.4	12	4.4	11 U	33	66.7 T
G142	LW2-G142	6.1	14	26	30	15	16	160	267 T
G143	LW2-G143	18	15	41	45	13	42	120	294 T
G144	LW2-G144	14	15	22	37	12	30	140	270 T
G145	LW2-G145	12	23	29	48	17	30	150	309 T
G146	LW2-G146	9.1	74	84	130	44	23	260	624 T
G147	LW2-G147	5.2	8.2	18	18	5.7	12	76	143 T
G148	LW2-G148	17	34	24	57	25	57	250	464 T
G149	LW2-G149	3.2	17	9.4	11	5.9	9.6 U	40	86.5 T
G150	LW2-G150	510	3700	340	1200	2000	1000	6600	15400 T
G152	LW2-G152	15	30	22	42	20	38	170	337 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G153	LW2-G153	39	94	68	120	65	110	880	1380 T
G154	LW2-G154	7.6	8.4	10	20	6.8	15 U	46	98.8 T
G155	LW2-G155	49	120	65	140	84	250	1000	1710 T
G156	LW2-G156	17	39	29	120	31	45	240	521 T
G157	LW2-G157	100	280	30	70	180	180	870	1710 T
G158	LW2-G158	19	36	33	57	31	54	400	630 T
G159	LW2-G159	6.7	26	8.9	13	15	17	33	120 T
G160	LW2-G160	180	290	63	130	150	270	840	1920 T
G161	LW2-G161	130	240	55	190	180	210	1100	2110 T
G162	LW2-G162	13	25	38	96	17	33	210	432 T
G163	LW2-G163	2.7	5.8	4.3	6	2.7	0.43 U	15	36.5 T
G164	LW2-G164	1.8 J	6.7	1.7 J	7.4	3.7	4 U	31	52.3 JT
G165	LW2-G165	9.3	15	8.7	24	9.1	18	53	137 T
G166	LW2-G166	14	57	11	24	15	52	110	283 T
G168	LW2-G168	18	53	41	69	68	34	240	523 T
G169	LW2-G169	6.8	7.7	14	23	6.6	19	56	133 T
G170	LW2-G170	7.2	34	12	27	18	17	210	325 T
G171	LW2-G171	8.1	11	23	28	8.6	22	77	178 T
G172	LW2-G172	18	34	18	43	27	28	260	428 T
G173	LW2-G173	3.3	3.3	6.7	8.4	3 J	0.91 U	28	52.7 JT
G174	LW2-G174	5.8	19	8.3	16	9.3	14	68	140 T
G175	LW2-G175	14	12	7.8	15	11	16	48	124 T
G176	LW2-G176	6.3	34	4.8	26	31	0.49 U	250	352 T
G177	LW2-G177	7.6	7	12	18	5.6	18	49	117 T
G178	LW2-G178	250	8200	2400	14000	4900	410	45000	75200 T
G179	LW2-G179	350	4300	260	3300	2700	930	29000	40800 T
G180	LW2-G180	17	170	290	430	93	58	680	1740 T
G181	LW2-G181	37	100	110	320	62	110	750	1490 T
G182	LW2-G182	11	77	13	69	77	21	350	618 T
G183	LW2-G183	1 J	1.3 J	14	9.5	0.66 J	4 U	3.6	30.1 JT
G184	LW2-G184	4.7	25	9.6	12	7.8	11	47	117 T
G185	LW2-G185	9	17	42	55	9.5	34	150	317 T
G186	LW2-G186	69	66	190	160	39	230	260	1010 T
G187	LW2-G187	1.2 J	2.1 J	1.3 J	1.2 J	1.7 J	0.53 UJ	5.3	12.8 JT
G188	LW2-G188	18	22	18	49	19	29	110	265 T
G189	LW2-G189	12	41	32	80	28	33	350	576 T
G190	LW2-G190	14	62	78	180	54	41	450	879 T
G191	LW2-G191	39	76	26	100	73	57	680	1050 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G192	LW2-G192	14	40	16	49	35	29	200	383 T
G193	LW2-G193	30	85	21	160	110	43	970	1420 T
G194	LW2-G194	41	140	480	460	76	140	590	1930 T
G195	LW2-G195	23	170	40	88	78	58	560	1020 T
G196	LW2-G196	26	320	35	360	290	63	2000	3090 T
G197-1	LW2-G197-1	88	130	38	150	110	210	970	1700 T
G197-2	LW2-G197-2	78	75	48	99	78	170	480	1030 T
G198	LW2-G198	22	63	28	100	58	52	520	843 T
G199	LW2-G199	260	270	19	130	230	2300	890	4100 T
G200	LW2-G200	11	37	18	40	28	32	190	356 T
G202	LW2-G202	9.8	44	8.6	42	40	19	170	333 T
G203-1	LW2-G203-1	15 T	42 T	13.5 T	63 T	39.5 T	30 T	295 T	498 T
G203-2	LW2-G203-2	22	46	19	88	50	53	400	678 T
G204	LW2-G204	41	330	160	160	210	110	950	1960 T
G205	LW2-G205	5.7	11	16	22	9.4	15	84	163 T
G206	LW2-G206	31	82	24	81	80	53	440	791 T
G207	LW2-G207	42	400	30	120	340	93	840	1870 T
G208	LW2-G208	21	97	30	77	86	61	450	822 T
G209	LW2-G209	70	160	37	290	220	140	1200	2120 T
G210	LW2-G210	270	4800	400	8200	4900	940	66000	85500 T
G212-1	LW2-G212-1	2.1 J	7.9	4.5	11	5.8	4.2	34	69.5 JT
G212-2	LW2-G212-2	7.5	31	7.1	13	21	17	130	227 T
G213	LW2-G213	60	280	170	230	86	320	3200	4350 T
G214-1	LW2-G214-1	34	55	24	80	45	85	390	713 T
G215	LW2-G215	54	310	73	200	160	160	840	1800 T
G216	LW2-G216	5.3	13	95	93	8.8	21	54	290 T
G217	LW2-G217	7.4	9.7	17	22	9.1	27	210 J	302 JT
G218	LW2-G218	27	96	10	76	60	55	430	754 T
G219	LW2-G219	11000	90000	9500	67000	32000	2500	180000	392000 T
G220	LW2-G220	23	380	98	200	140	67	540	1450 T
G221	LW2-G221	580	11000	1400	8800	4900	520	42000	69200 T
G222	LW2-G222	14	120	38	64	68	34	240	578 T
G223	LW2-G223	1400	33000	7800	37000	22000	1200	140000	242000 T
G224	LW2-G224	16	27	17	34	23	34	170	321 T
G225	LW2-G225	46000	430000	54000	390000	220000	73000	1700000	2910000 T
G226	LW2-G226	8.9	40	26	140	40	17	300	572 T
G227	LW2-G227	1.5 J	3.3	3.4	7.4	2.1 J	4.7 U	25	42.7 JT
G228	LW2-G228	24	75	47	140	83	51	970	1390 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G229	LW2-G229	18	47	35	67	28	39	240	474 T
G230	LW2-G230	6.9	67	32	120	60	21 U	370	656 T
G231	LW2-G231	6.1	28	14	40	21	17	140	266 T
G232	LW2-G232	14	78	37	100	68	24	580	901 T
G233	LW2-G233	26	67	110	100	44	67	290	704 T
G234	LW2-G234	1.7 J	55	3.1	16	30	5.3 U	320	426 JT
G235	LW2-G235	25	22	280 J	170 J	20	96 J	69 J	682 JT
G236	LW2-G236	23	30	37	69	30	57	380	626 T
G237	LW2-G237	27	78	57	150	58	68	520	958 T
G238	LW2-G238	78	61	20	58	54	170	180	621 T
G239	LW2-G239	11	14	15	32	12	26	110	220 T
G240	LW2-G240	26	67	56	130	58	67	450	854 T
G241	LW2-G241	18	47	29	56	36	45	190	421 T
G242	LW2-G242	20	66	56	150	52	49	550	943 T
G243	LW2-G243	3.5	5.5	6.6	9.5	3.2	9.2 U	20	48.3 T
G244	LW2-G244	17	21	20	61	19	45	210	393 T
G245	LW2-G245	36	110	42	160	94	90	900	1430 T
G246	LW2-G246	15	26	31	61	20	44	190	387 T
G247	LW2-G247	29	35	28	87	36	60	390	665 T
G248	LW2-G248	4.7	8.6	8.9	19	5.5	11	36	93.7 T
G249	LW2-G249	39	17	36	39	28	52	70	281 T
G250-1	LW2-G250	22	14	47	51	27	31	410	602 T
G251-1	LW2-G251-1	97	400	140	430	160	170	2200	3600 T
G251-1	LW2-G251-2	30	130	100	160	79	93	2400	2990 T
G252	LW2-G252	13	56	37	46	22	33	130	337 T
G253	LW2-G253	220	430	1200	1100	360	550	310	4170 T
G254	LW2-G254	23	130	26	120	71	110	470	950 T
G255	LW2-G255	110	11	41	89	20	150	270	691 T
G256	LW2-G256	7.1	1500	37	59	15	17	150	1790 T
G257	LW2-G257	110	24	110	87	20	200	130	681 T
G258	LW2-G258	220	1200	200	690	730	140	2500	5680 T
G259	LW2-G259	840	2400	1200	3900	1600	1700	16000	27600 T
G260	LW2-G260	31	8	31	39	10	54	150	323 T
G261	LW2-G261	4.6	24	4.9	23	10	11	68	146 T
G262	LW2-G262	5.4	5.2	1.9 J	8.6	5.5	5.7	20	52.3 JT
G263	LW2-G263	330	510	180	640	280	13000	3100	18000 T
G264	LW2-G264	8900	51000	3700	60000	21000	22000	230000	397000 T
G265	LW2-G265	27	390	260	190	42	120	270	1300 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Low Molecular Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G266	LW2-G266	4.5	3.4	18	18	3.8	11 U	17	64.7 T
G267	LW2-G267	4.4	5.1	4.6	13	4.6	9.9	27	68.6 T
G268	LW2-G268	13	28	9.7	65	24	30	85	255 T
G269	LW2-G269	2600	7300	670	5700	4200	2300	35000	57800 T
G270-1	LW2-G270-1	1800	6300	1100	6800	3200	3200	43000 J	65400 JT
G270-2	LW2-G270-2	4200	8000	2300	10000	5000	3900	45000	78400 T
G271	LW2-G271	0.77 J	1.6 J	1.6 J	2.2 J	1 J	1.6 U	6	13.2 JT
G272	LW2-G272	15	32	18	34	17	41	100	257 T
G273	LW2-G273	360	3800	750	2500	2300	860	22000	32600 T
G274	LW2-G274	250	3300	1400	6700	2100	1200	8300	23300 T
G275-1	LW2-G275-1	24	710	12	110	490	35	920	2300 T
G275-2	LW2-G275-2	75	1800	22	200	850	94	1700	4740 T
G276	LW2-G276	460	910	350	1200	470	510	4500	8400 T
G277	LW2-G277	6.5	7.7	4	18	9.4	12	46	104 T
G278	LW2-G278	3500	6600	2700	7100	3800	3400	32000	59100 T
G280	LW2-G280	18	16	8.5	32	21	65	82	243 T
G281	LW2-G281	2.5	1.6 J	8.8	5.1	1.4 J	3.8	5.1	28.3 JT
G282	LW2-G282	79	39	31	75	69	180	350	823 T
G283	LW2-G283	17000	89000	11000	78000	41000	38000	320000	594000 T
G284	LW2-G284	130	1500	360	720	650	290	5600	9250 T
G285	LW2-G285	1.7 J	1.3 J	1.5 J	1.9 J	0.87 J	3.2	5.3	15.8 JT
G287	LW2-G287	23	430	4.5	26	110	42	200	836 T
G288	LW2-G288	200000	240000	5400	140000	110000	230000	790000	1720000 T
G289	LW2-G289	760	5100	1400	4500	2600	1600	35000	51000 T
G290	LW2-G290	18	170	5.8	45	78	10	320	647 T
G291	LW2-G291	23	26	7.9	34	25	31	82	229 T
G292	LW2-G292	1600	9400	3100	10000	4400	2100	39000	69600 T
G293	LW2-G293	22	35	9.2	44	33	40	110	293 T
G294-1	LW2-G294-1	52000	99000	3000	53000	40000	73000	300000	620000 T
G294-2	LW2-G294-2	8050 T	37000 T	4450 T	35500 T	23000 T	13000 T	165000 T	286000 T
G295	LW2-G295	3.6	3.6	3.2	10	4.5	8.1	15	48 T
G296	LW2-G296	8.9	8.1	5.1	12	8	20	20	82.1 T
G297	LW2-G297	350	13000	700	5600	5700	480	41000	66800 T
G298	LW2-G298	630000	600000	14000	350000	340000	1500000	1700000	5130000 T
G299	LW2-G299	700	2700	250	510	750	890	2300	8100 T
G300	LW2-G300	1.5 J	1.2 J	1.1 J	2.2 J	1.3 J	0.5 U	5.1	12.4 JT
G301	LW2-G301	37000	63000	6200	78000	59000	2300	400000	646000 T
G302	LW2-G302	320	650	1700	2400	420	1100	6200	12800 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G303	LW2-G303	13	14	5	17	16	26	34	125 T
G305	LW2-G305	280	1400	210	480	1000	590	5200	9160 T
G306	LW2-G306	7	8.5	3.6	12	8.4	16 U	32	71.5 T
G307	LW2-G307	80	830	6.5	37	410	92	400	1860 T
G308	LW2-G308	140	3000	100	4200	2800	170	12000	22400 T
G309	LW2-G309	31	140	76	160	100	74	820	1400 T
G310	LW2-G310	8.3	20	6.8	12	11	15	56	129 T
G311-1	LW2-G311-1	530 T	2050 T	415 T	2900 T	1650 T	685 T	19000 T	27200 T
G311-2	LW2-G311-2	37	230	150	250	160	100	990	1920 T
G313	LW2-G313	5.7	25	5.2	12	17	0.64 U	82	147 T
G314	LW2-G314	21	2900	52	110	860	47	450	4440 T
G315	LW2-G315	31	150	48	110	96	69	640	1140 T
G316	LW2-G316	11	9.3	70	33	6.7	35	36	201 T
G317	LW2-G317	2.1 J	3.2	2.5	6.1	2.8	0.55 U	15	31.7 JT
G318	LW2-G318	81	3700	180	840	2300	130	4800	12000 T
G319	LW2-G319	1.5 J	1.4 J	1.1 U	3.7	1.5 J	5.2 U	6.1	14.2 JT
G320	LW2-G320	170	11000	260	1600	5800	210	12000	31000 T
G321	LW2-G321	66	190	32	87	87	150	970	1580 T
G322	LW2-G322	200	8300	150	1600	5700	340	20000	36300 T
G323	LW2-G323	58 J	76	290 J	190 J	55	140 J	360	1170 JT
G324-1	LW2-G324-1	11	27	61	58	19	32	190	398 T
G324-2	LW2-G324-2	39	250 J	52	430	140	75	1300	2290 JT
G325	LW2-G325	12	1100	72	200	140	30	210	1760 T
G326	LW2-G326	46	95	19	45	52	87	310	654 T
G327	LW2-G327	54	66	45	81	49	110	370	775 T
G328	LW2-G328	1.2 J	1.4 J	1.3 U	5.7	1.7 J	5.9 U	20	30 JT
G329	LW2-G329	2.8	22	5.3	31	5.5	0.47 U	28	94.6 T
G330	LW2-G330	26	1200	39	380	750	0.74 U	3000	5400 T
G331	LW2-G331	19	88	180	240	100	38	2300	2970 T
G332	LW2-G332	17	150	26	65	79	43	300	680 T
G333	LW2-G333	60	180	51	220	110	130	950	1700 T
G334	LW2-G334	18	170	16	680	280	36	2000	3200 T
G335	LW2-G335	23	18	11	44	18	58	280	452 T
G336	LW2-G336	10	12	6.3	11	6.3	28	42	116 T
G337	LW2-G337	3.3	3.1	4.3	7.5	3.3	11 U	17	38.5 T
G338	LW2-G338	4.3	7.5	6	14	6.8	13 U	32	70.6 T
G339	LW2-G339	3.6	4.3	4.3	8.6	3.8	9.9	28	62.5 T
G340	LW2-G340	3.1	3.4	3.4	6	3.8	12 U	20	39.7 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G341	LW2-G341	4.6	3.8	5.6	9.7	3.7	18 U	27	54.4 T
G342	LW2-G342	4.2	5.7	5.4	13	9.5	12	130	180 T
G343	LW2-G343	4.7	4.4	2.4 J	6.1	4.1	9.7 U	17	38.7 JT
G344	LW2-G344	3.5	2.9 J	5.6	12	3.2	12 U	20	47.2 JT
G345-1	LW2-G345-1	2.8 T	4.75 T	6.7 T	14.5 T	5 T	7.65 T	41 T	82.4 T
G345-2	LW2-G345-2	3.4	6.5	8.3	16	6.8	9.6	50	101 T
G346	LW2-G346	8.3	9.3	14	45	17	23	110	227 T
G347	LW2-G347	9.5	11	12	33	14	20	100	200 T
G348	LW2-G348	5.5	16	5.2	12	41	13	220	313 T
G349	LW2-G349	19	11	8.4	25	14	43	86	206 T
G350	LW2-G350	38	100	25	160	180	0.7 U	1100	1600 T
G351	LW2-G351	8	41	14	53	38	14	170	338 T
G351-2	LW2-G351-2	29.5 T	175 T	78 T	255 T	215 T	28.5 T	1040 T	1820 T
G352	LW2-G352	2.3 J	1.7 J	2.1 J	3.1	1.6 J	5.8 U	11	21.8 JT
G353-1	LW2-G353-1	5	9.6	8.7	23	13	8.9	110	178 T
G353-2	LW2-G353-2	7.3	17	7.4	17	13	11	84	157 T
G354	LW2-G354	4.2	3.1	3.8	5.7	3.4	12 U	17	37.2 T
G355	LW2-G355	14 J	93	85	1100	130	16 J	4900	6340 JT
G356	LW2-G356	3.9	6.2	10	24	9	0.86 U	47	100 T
G357	LW2-G357	1.9 J	1.4 U	1.8 J	2.4 J	1.5 J	7.5 U	9.3	16.9 JT
G358	LW2-G358	3.2	2.9 J	6.2	11	3.5	14 U	22	48.8 JT
G359	LW2-G359	3.2	2.9 J	3	6.5	3.9	0.83 U	23	42.5 JT
G360	LW2-G360	2.9	5.3	5.4	13	5.5	6.5	52	90.6 T
G361	LW2-G361	3.3	1.9 J	4.9	5.8	2.9	10	19	47.8 JT
G362-1	LW2-G362-1	4.45 T	4.3 T	6.6 T	12 T	5.45 T	12.4 T	41.5 T	86.7 T
G362-2	LW2-G362-2	1.7 J	1.1 J	2.4 J	4.7	1.5 J	5 U	9.6	21 JT
G363	LW2-G363	2.5 J	1.8 J	4.1	5.4	2.4 J	6.6	19	41.8 JT
G364	LW2-G364	15	14	17	18	10	37	96	207 T
G365	LW2-G365	11	9.8	4.9	8.6	6.6	33	35	109 T
G366	LW2-G366	1.7 J	1.6 J	3.3	6.5	1.7 J	4.5 U	21	35.8 JT
G367	LW2-G367	14	75	20	48	74	23	710	964 T
G368	LW2-G368	5	10	4.8	12	10	13	52	107 T
G369	LW2-G369	1.9 J	1.8 U	3.9	6.7	2.3 J	8.2 U	16	30.8 JT
G370	LW2-G370	3.3	3.8	3.4	9	3.5	10 U	29	52 T
G371	LW2-G371	4.9	4.4	4.2	9.8	4.4	12	36	75.7 T
G372-1	LW2-G372-1	4.25 T	3.4 JT	3.6 JT	7.15 T	3.4 JT	9 T	30 T	60.8 JT
G372-2	LW2-G372-2	1.7 J	3 J	3.3	7.2	2.5 J	5.2	24	46.9 JT
G373	LW2-G373	1.9 J	1.1 J	2 J	2.4 J	1.6 J	7.8 U	9	18 JT

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G374	LW2-G374	1.8 J	1.5 J	5.6	9.3	2 J	7.1 U	13 J	33.2 JT
G375	LW2-G375	2.2 J	2 J	1.8 J	3.1	1.9 J	7.9 U	14	25 JT
G376	LW2-G376	3.2	8.8	4.2	13	7.5	5.5	68	110 T
G377	LW2-G377	1.1 J	0.56 J	2 J	1.5 J	0.58 J	3.1 U	7.2	12.9 JT
G378	LW2-G378	2.8 U	1.7 J	3.4	4.7	2.3 J	11 U	18	30.1 JT
G379	LW2-G379	9.5	10	16	30	12	22	93	193 T
G380	LW2-G380	36	200	57	290	160	32	1100	1880 T
G381	LW2-G381	4.6	7.2	2.9 U	9.9	6	25	34	86.7 T
G382	LW2-G382	14	14	12	30	15	32	140	257 T
G383	LW2-G383	5.9	3.5	1.6 J	7.5	6	4.8 U	45	69.5 JT
G384-1	LW2-G384-1	4.4 T	8.05 T	1.95 JT	6.65 T	5.8 T	6.6 T	39.5 T	73 JT
G384-2	LW2-G384-2	9.8	8	2.6 J	11	8.4	11	71	122 JT
G385	LW2-G385	3.5 J	4	6.6	12	5.5	8.2	43	82.8 JT
G386	LW2-G386	2.4 J	2.6	1.3 J	3.7	2.6	5.5 U	21	33.6 JT
G387	LW2-G387	1.6 J	1 J	1.9 J	2.6 J	1.2 J	7.7 U	8.2	16.5 JT
G388	LW2-G388	2.4 J	1.6 J	1.9 J	5.8	1.3 J	6.9 U	22	35 JT
G389	LW2-G389	0.51 U	0.24 U	0.61 J	0.33 U	0.29 U	1.2 U	0.53 J	1.14 JT
G390	LW2-G390	40	300	46	440	290	62	1900	3080 T
G391	LW2-G391	4.1	2.1 J	4.2	8.6	3.4	12 U	19	41.4 JT
G392	LW2-G392	30	55	15	97	57	64	550	868 T
G393	LW2-G393	16 J	180	44	380	170	23 U	1300	2090 JT
G394	LW2-G394	180	210	72 U	89	720	95	2000	3290 T
G395	LW2-G395	3.3	1.9 J	1.8 J	4.2	1.8 J	10 U	20	33 JT
G396	LW2-G396	0.69 J	0.25 U	0.72 J	0.62 J	0.3 U	2 U	4.9	6.93 JT
G397	LW2-G397	8.1	11	25	48	16	23	130	261 T
G398	LW2-G398	12	4.5	4.7	7.8	5.1	35	37	106 T
G399	LW2-G399	17	18	31	74	18	31	170	359 T
G400	LW2-G400	1.6 U	0.64 J	1.3 J	1.5 J	0.88 J	7.5 U	5.5	9.82 JT
G401	LW2-G401	15	27	29	88	36	29	450	674 T
G402	LW2-G402	7.5	20	17	43	18	14	160	280 T
G403	LW2-G403	4.3	7.8	1.5 J	8.6	4.6	6.5	36 J	69.3 JT
G404	LW2-G404	8.9	17	11	28	20	1 U	140	225 T
G405	LW2-G405	6.3	2.9	3.5	9.1	40 U	7.2 U	47	68.8 T
G406	LW2-G406	2.6	1.5 J	2.2 J	3.3	1.7 J	9.2 U	13	24.3 JT
G407	LW2-G407	3.1	3.6	3.1	5.9	3.9	9.9 U	31	50.6 T
G408	LW2-G408	7.6	43	7.5	21	36	8.9	110	234 T
G409	LW2-G409	11	7.9	2 J	3.9	5.2	30	25	85 JT
G410-1	LW2-G410-1	1.9 J	1.3 J	2.6 J	2.7 J	1.7 J	6.3	12	28.5 JT

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G410-2	LW2-G410-2	5.8 U	2.5 J	6.6	7.4	3.4 J	17 U	20	39.9 JT
G411	LW2-G411	1.1 J	1.7 J	2.3 J	4.6	1.9 J	3.3 U	17	28.6 JT
G412	LW2-G412	2 U	0.78 J	1.4 J	2.1 J	1.1 J	7.6 U	6.7	12.1 JT
G413	LW2-G413	1 J	1.3 J	1.4 J	1.9 J	1.3 J	3.1 U	6	12.9 JT
G414	LW2-G414	2.6 U	0.92 J	3.2	3.7	1.6 J	10 U	12	21.4 JT
G415	LW2-G415	19	81	93	300	80	30	1100	1700 T
G416	LW2-G416	13	6.2	23	41	7	20	95	205 T
G417	LW2-G417	4.2	2.5 J	2.5	4.2	1.9 J	20	13	48.3 JT
G418	LW2-G418	4.1	2.4 J	3.3 J	4.1	2.7 J	12 U	14	30.6 JT
G419	LW2-G419	3.7	1.9 J	2.1 J	3.5	2.3 J	12 U	20	33.5 JT
G420	LW2-G420	6.6	4.7	3.4	5.1	4.3	16	67	107 T
G421	LW2-G421	14	46	80	190	46	28	320	724 T
G422	LW2-G422	23	9.8	9.8	14	10	110	52	229 T
G423	LW2-G423	2.9 U	1.7 J	3.1	3.8	1.7 J	10 U	12	22.3 JT
G424	LW2-G424	1.9 J	1.1 J	1.8 J	3.8	1.4 J	5.9 U	14	24 JT
G425	LW2-G425	5.9	2.4 J	2 J	3.3	3.9	5.2 U	22	39.5 JT
G426	LW2-G426	20	82	150	320	140	41	980	1730 T
G427	LW2-G427	16	4.5	5	13	6.6	19 U	29	74.1 T
G428	LW2-G428	2.3 U	1.5 J	0.98 J	2.1 J	1 J	7.3 U	8.2	13.8 JT
G429	LW2-G429	1.1 J	0.87 J	1.3 J	1.9 J	0.93 J	3.5 U	6.3	12.4 JT
G430	LW2-G430	0.98 J	6.2	2.4 J	48	7.6	2.9 U	100	165 JT
G431	LW2-G431	15	29	7.1	83	32	24	300	490 T
G432	LW2-G432	29	41	15	80	45	35	320	565 T
G433-1	LW2-G433-1	3	5.3	2 J	4.7	4.4	8.4 U	33	52.4 JT
G433-2	LW2-G433-2	2.3 J	5	5.8	6	3.6	11	32	65.7 JT
G434	LW2-G434	21	37	91	430	64	32	740	1420 T
G435	LW2-G435	1 J	0.55 J	1.4 J	0.88 J	0.7 J	4	3.4	11.9 JT
G436	LW2-G436	2 U	1.9 J	1.1 J	3.6	3.3	6.8 U	9.4	19.3 JT
G437	LW2-G437	7.7	6	8.6	13	7.3	18	52	113 T
G438	LW2-G438	14	13	11	22	9.1	46	91	206 T
G439	LW2-G439	10	11	16	29	12	22	100	200 T
G440	LW2-G440	1.7 J	2.4 J	2.9	3.4	1.9 J	5.1 U	12	24.3 JT
G441	LW2-G441	5.7	5.4	5.7	10	6.4	12	61	106 T
G442	LW2-G442	1.5 J	2 J	3.2	4.2	1.7 J	6.5	16	35.1 JT
G443	LW2-G443	1.3 J	0.89 J	1.9 J	2.6	1.1 J	5.5 U	9.3	17.1 JT
G444	LW2-G444	3.4	3.5	4	6.4	3.2	0.69 U	24	44.5 T
G445	LW2-G445	74	810	21	95	110	150	360	1620 T
G446	LW2-G446	15	4	2.1 J	5.1	4.1	6.3	24	60.6 JT

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**								
G447	LW2-G447	1.8 J	1.7 J	2.9	3.7	1.7 J	4.6 U	13	24.8 JT
G448	LW2-G448	2.8 J	3.8	3.7	6.4	4.2	5.9 U	34	54.9 JT
G449	LW2-G449	2.9 J	1.8 U	4.7	4.5	2.8 J	13 U	16	30.9 JT
G450-1	LW2-G450-1	5.8	7	5	12	8.7	10 U	48	86.5 T
G450-2	LW2-G450-2	6.6	5.7	4.7	10	8.1	16	44	95.1 T
G451	LW2-G451	2.9	4.5	19	3.6	2.6	8.9	15	56.5 T
G452	LW2-G452	2.2 J	1.3 J	3.2	4.2	1.8 J	10 U	13	25.7 JT
G453	LW2-G453	360	220	53 U	170	520	100	2000	3370 T
G454	LW2-G454	0.81 J	0.34 J	0.58 J	1.1 J	0.54 J	3.1 U	4.4	7.77 JT
G455	LW2-G455	12	14	4.1	18	22	8.5 U	93	163 T
G456	LW2-G456	59	130	10	180	120	35	910	1440 T
G457	LW2-G457	14	29	8.4	50	28	18	240	387 T
G458	LW2-G458	3.9	2.7 J	4.8	6.8	3.5	14	31	66.7 JT
G459	LW2-G459	1.4 J	2 J	2 J	4.3	1.7 J	3 U	18	29.4 JT
G460	LW2-G460	2.4 J	1.1 U	3.8	4.3	1.8 J	11 U	10	22.3 JT
G461	LW2-G461	2.5 J	1.4 J	2.2 J	3.4	1.9 J	6.7 U	15	26.4 JT
G462	LW2-G462	2.6 J	1.8 J	4.2	5.4	2.7 J	11 U	17	33.7 JT
G463	LW2-G463	0.82 J	1 J	2.4 J	3.5	1.2 J	2.5 U	13	21.9 JT
G464	LW2-G464	2.2 J	1.5 U	3.8	5.2	2.4 J	11 U	14	27.6 JT
G465	LW2-G465	0.72 J	0.48 J	0.7 J	0.7 J	0.51 J	2.4 U	3.4	6.51 JT
G466	LW2-G466	0.87 J	1.1 J	1.5 J	1.9 J	0.89 J	2.6 U	7.3	13.6 JT
G467	LW2-G467	64 J	470 J	64 J	890 J	960 J	17	5600	8070 JT
G468	LW2-G468	11	6.5	14	20	11	27	60	150 T
G469	LW2-G469	1.7 J	0.89 J	1.1 J	1.6 J	1.4 J	7.8 U	7.1	13.8 JT
G470	LW2-G470	1.2 J	1.2 J	1.2 J	1.8 J	0.89 J	4 U	8.3	14.6 JT
G471	LW2-G471	1.4 J	0.77 J	2 J	2 J	1.4 J	5.3 U	8.2	15.8 JT
G472	LW2-G472	1.1 J	13	3.6	22	1.4 J	3.8 U	17	58.1 JT
G473	LW2-G473	13	20	22	54	20	18	160	307 T
G474	LW2-G474	2.8 J	2.4 J	2.2 J	3.2	3.5	7.3 U	14	28.1 JT
G475-1	LW2-G475-1	2.5 J	1.3 J	31	27	3	6.2 U	84	149 JT
G475-2	LW2-G475-2	1.1 J	0.55 J	1.6 J	2.5 J	0.97 J	3.7 U	7.2	13.9 JT
G476	LW2-G476	1.3 J	2.4 J	1.4 J	1.8 J	1.2 J	3.6 U	8.4	16.5 JT
G477	LW2-G477	50	24	16	42	31	31	780	974 T
G478	LW2-G478	1 J	0.35 J	1.5 J	1 J	0.49 J	3.5 U	3.2	7.54 JT
G479	LW2-G479	1.7 J	2.2 J	2.3 J	4	2.6 J	5.4 U	13	25.8 JT
G480	LW2-G480	16	630	11	38	340	27	770	1830 T
G481	LW2-G481	0.98 J	0.64 J	0.84 J	1.1 J	0.58 J	2.6 U	3.8	7.94 JT
G482	LW2-G482	0.97 J	0.71 J	1.4 J	1.2 J	0.97 J	3.3 U	4.1	9.35 JT

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G483	LW2-G483	1 J	0.43 J	1.1 J	1.1 J	0.74 J	3.5 U	5	9.37 JT
G484	LW2-G484	1.8 J	1.4 J	2.6 J	2.6 J	1.6 J	7.6	11	28.6 JT
G485	LW2-G485	3.1	7.3	2.2 J	5.8	10	4.6 U	57	85.4 JT
G486	LW2-G486	0.98 J	0.72 J	1.7 J	1.9 J	0.68 J	3.2 U	5.3	11.3 JT
G487	LW2-G487	1.4 J	1.6 J	4	12	2.2 J	2.2 U	25	46.2 JT
G488	LW2-G488	2.8 J	3	2.5 J	3.6	3.3	6.6 U	15	30.2 JT
G489	LW2-G489	1.8 J	1.3 J	2 J	2.4 J	1.4 J	4.8	10	23.7 JT
G490	LW2-G490	2.4 J	1.8 J	2.2 J	2.9 J	2.2 J	7.4	14	32.9 JT
G491	LW2-G491	27	76	5.9	25	52	21	240	447 T
G492-1	LW2-G492-1	2.05 JT	1.8 JT	3.8 T	7.05 T	2.35 T	5.5 UT	32 T	49.1 JT
G492-2	LW2-G492-2	2.7	2.9	4.2	7.5	3.5	7.4 U	45	65.8 T
G493	LW2-G493	2.4 J	1.4 J	2.7 J	3 J	1.7 J	8 U	12	23.2 JT
G494	LW2-G494	5.4	10	15	23	13	7.7	150	224 T
G495	LW2-G495	8.3	28	4.8	26	21	13	150	251 T
G496	LW2-G496	1.1 J	2 J	3.4	8.2	0.93 J	3.3 U	9.9	25.5 JT
G497	LW2-G497	15	36	12	52	36	23	310	484 T
G498	LW2-G498	4.8	28	3.6	34	18	12	180	280 T
G499	LW2-G499	2.3 J	2.8 J	5.6	9.4	3.1	7	22	52.2 JT
G500	LW2-G500	20	45	35	120	32	45	660	957 T
G501	LW2-G501	3.4	2.6 J	3.3	4.1	2.3 J	9.1	18	42.8 JT
G502	LW2-G502	1.3 J	0.34 J	1.4 J	1.3 J	0.44 J	2.3 U	2.9	7.68 JT
G503	LW2-G503	1.6 J	5.8	4.7	16 J	8.1	4	53 J	93.2 JT
G504	LW2-G504	2.7 J	1.4 J	2.8 J	3.6 J	2 J	5.1 UJ	15 J	27.5 JT
G505	LW2-G505	4.8	3.2	7.1	10	3.8	9.7	36	74.6 T
G506	LW2-G506	7.5	18	12	15	8.2	26	81	168 T
G507	LW2-G507	3.4 U	1.1 J	3 J	3.2 J	1.5 J	11 U	11	19.8 JT
G508	LW2-G508	8.1	65	15	21	8.4	3.1 U	34	152 T
G509	LW2-G509	5.6 U	2.2 J	7.2	8.6	4.7 J	18 U	25	47.7 JT
G510	LW2-G510	1.8 J	2.2 J	5.4	6.2	3 J	5.2 U	18	36.6 JT
G511	LW2-G511	1.8 J	1.5 J	2.5	2.7	1.6 J	3.7 U	11	21.1 JT
G512	LW2-G512	1.3 J	1.4 J	2.2 J	2.8	1.3 J	4.6 U	12	21 JT
G513	LW2-G513	2.8	2.1 J	4.5	4.7	2 J	5.2	15	36.3 JT
G514	LW2-G514	1.2 J	1.4 J	3.4 J	4.3 J	1.4 J	4.2 UJ	9.5 J	21.2 JT
G515	LW2-G515	2.3 J	1.8 J	4.6	4.7	2.4 J	7.1	15	37.9 JT
G516	LW2-G516	3.2	4.9	8.7	43	20	4.1 U	99	179 T
G517	LW2-G517	3	8.3	6.3	11	6.4	5.5	49	89.5 T
G518	LW2-G518	180	420	29	120	400	260	960	2370 T
G519-1	LW2-G519-1	6.5	8.3	9.8	20	5.3	15 U	45	94.9 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
G519-1	LW2-G519-2	29	86	18	57	53	42	230	515 T
G520	LW2-G520	14	22	23	50	17	42	130	298 T
G521	LW2-G521	190	1100	550	700	520	520	5700	9280 T
U1C-1	LW2-U1C-1	0.85 U	0.49 U	0.6 U	1.4 U	0.8 U	2 U	1.2 U	2 UT
U1C-2	LW2-U1C-2	0.63 U	0.26 U	0.63 U	0.35 U	0.3 U	1.7 U	0.88 U	1.7 UT
U1C-3	LW2-U1C-3	0.63 U	0.24 U	0.78 U	0.36 U	0.28 U	2 U	0.93 U	2 UT
U2C-1	LW2-U2C-1	1.2 U	0.86 U	1.7 U	1.6 U	1.2 U	4.4 U	19	19 T
U2C-2	LW2-U2C-2	1.6 U	1.2 U	1.9 U	2.3 U	1.3 U	4.2 U	7.8	7.8 T
U2C-3	LW2-U2C-3	0.64 U	0.37 U	0.66 U	0.59 U	0.3 U	1.9 U	1.4 U	1.9 UT
U3C-1	LW2-U3C-1	0.64 U	0.29 U	0.82 U	0.55 U	0.42 U	2.4 U	2 U	2.4 UT
U3C-2	LW2-U3C-2	1 U	0.28 U	0.93 U	0.83 U	0.33 U	3.7 U	2.5 U	3.7 UT
U3C-3	LW2-U3C-3	1.1 U	0.38 U	1.6 U	1.4 U	0.56 U	5.2 U	4.4	4.4 T
U4Q-1	LW2-U4Q-1	4.2 U	0.72 J	3.2 J	2.2 J	1.5 J	13 U	9	16.6 JT
U4Q-2	LW2-U4Q-2	1.4 U	0.94 U	1.5 U	2.1 U	1 U	3.8 U	7.3	7.3 T
U4Q-3	LW2-U4Q-3	1.1 U	0.33 U	1.2 U	0.93 U	0.54 U	3.3 U	3 U	3.3 UT
U5Q-1	LW2-U5Q-1	0.77 U	0.24 U	0.54 U	0.36 U	0.28 U	1.5 U	0.59 U	1.5 UT
U5Q-2	LW2-U5Q-2	0.74 U	0.24 U	0.85 U	0.84 U	0.33 U	2.3 U	1.4 U	2.3 UT
U5Q-3	LW2-U5Q-3	0.76 U	0.24 U	0.33 U	0.33 U	0.28 U	1.9 U	0.91 J	0.91 JT
U6TOC-1	LW2-U6TOC-1	1.4 U	0.41 U	1.8 U	0.89 U	0.88 U	5.9 U	3.7 U	5.9 UT
U6TOC-2	LW2-U6TOC-2	1.9 U	0.73 U	2.9 U	1.7 U	1.1 U	9.7 U	6.6	6.6 T
U6TOC-3	LW2-U6TOC-3	3.2 U	0.57 J	2.6 J	1.4 J	1 J	13 U	5.1	10.7 JT
Subsurface Sediment Samples									
C009	LW2-C009-B	6.8	32	8.4	13	9.2	11	71	151 T
C009	LW2-C009-C	12	23	10	9.2	6.6	17	72	150 T
C011-1	LW2-C011-B1	7.55 T	14 T	9.15 T	12.4 T	6.55 T	32 T	60.5 T	142 T
C011-1	LW2-C011-C1	47.5 T	140 T	18.5 T	29.5 T	68.5 T	80 T	420 T	804 T
C011-1	LW2-C011-D1	41.5 T	315 T	63 T	360 T	410 T	130 UT	1650 T	2840 T
C011-2	LW2-C011-B2	2.6	4.4	5.8	6.7	1.7 J	13 U	23	44.2 JT
C011-2	LW2-C011-C2	23	23	26	32	17	55	160	336 T
C011-2	LW2-C011-D2	45	130	18	24	51	78	350	696 T
C011-2	LW2-C011-E2	10	8.6	21	32	6.4	27	150	255 T
C015	LW2-C015-B	18	43	19	23	26	21	140	290 T
C015	LW2-C015-C	11	39	16	41	22	19	250	398 T
C015	LW2-C015-D	210	290	75	390	380	140	1400	2890 T
C019-1	LW2-C019-B1	6.1	16	83	130	12	17	180	444 T
C019-1	LW2-C019-C1	16	24	23	41	27	41	130	302 T
C020	LW2-C020-B	15	64	20	69	58	27	290	543 T
C020	LW2-C020-C	29	55	37	32	20	88	140	401 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	91-57-6 2-Methylnaphthalene ug/kg	83-32-9 Acenaphthene ug/kg	208-96-8 Acenaphthylene ug/kg	120-12-7 Anthracene ug/kg	86-73-7 Fluorene ug/kg	91-20-3 Naphthalene ug/kg	85-01-8 Phenanthrene ug/kg	Low Molecular Weight PAHs ug/kg
Location	**Sample ID**								
C022	LW2-C022-B	2.1 J	5.6	3.2	6.7	3.6	5.4 U	22	43.2 JT
C022	LW2-C022-C	4.2	5.5	4	6.8	4.1	12	26	62.6 T
C025-1	LW2-C025-B1	0.61 J	0.53 J	0.46 J	0.87 J	0.34 J	1.1 U	3.6	6.41 JT
C025-1	LW2-C025-C1	0.54 U	0.26 U	0.35 U	0.35 U	0.3 U	0.88 U	0.52 U	0.88 UT
C025-2	LW2-C025-D2	0.49 U	0.21 U	0.29 U	0.29 U	0.25 U	1.8 U	0.47 J	0.47 JT
C027	LW2-C027-B	2.6	8.2	7.4	24	4.7	5.9	72	125 T
C027	LW2-C027-C	2.6	9	1.9 J	4.7	3.6	5.2	24	51 JT
C034	LW2-C034-B	2.4 J	23	4.4	10	2.9	2.7	35	80.4 JT
C034	LW2-C034-C	4.6	50	6.8	16	17	8.3	230	333 T
C034	LW2-C034-E	4.2	5.6	16	18	5.5	8.8	140	198 T
C038	LW2-C038-B	13	95	14	97	110	46	550	925 T
C038	LW2-C038-C	1.8 J	2 J	1.9 J	3.3	3.3	9.8 U	30	42.3 JT
C038	LW2-C038-D	0.79 J	0.23 U	0.45 J	0.62 J	0.28 U	8.1 U	2.2 J	4.06 JT
C060	LW2-C060-B	230	530	200	480	360	420	2800	5020 T
C060	LW2-C060-C	730	3000	400	2500	1800	1200	14000	23600 T
C061	LW2-C061-B	6.9	31	8.4	18	8.4	13	100	186 T
C061	LW2-C061-C	130	210	61	110	76	270	830	1690 T
C061	LW2-C061-E	5	4.1	3.1	4.2	3.8	21	23	64.2 T
C062	LW2-C062-B	9.2	1.7 J	3.6	6.9	3.1	0.44 U	27	51.5 JT
C062	LW2-C062-C	3.9	1.7 J	5.1	4.9	2.7	0.66 J	18	37 JT
C062	LW2-C062-D	0.73 J	0.22 U	0.3 U	0.3 U	0.26 U	0.47 U	0.44 U	0.73 JT
C064	LW2-C064-B	29	42	58	130	55	200	600	1110 T
C064	LW2-C064-C	1.1 J	0.81 J	1.3 J	1.9 J	1.1 J	0.54 U	6.8	13 JT
C064	LW2-C064-G						0.55 U		
C066	LW2-C066-B	2.3 J	4.7	2.6	3.1	1.2 J	12 U	9.4	23.3 JT
C066	LW2-C066-C	0.67 J	0.24 U	0.32 U	0.32 U	0.28 U	7.2 U	0.48 U	0.67 JT
C067	LW2-C067-B	15	66	16	43	49	45	210	444 T
C067	LW2-C067-D	240	510	130	490	320	740	2700	5130 T
C067	LW2-C067-E	34	42	39	75	37	130	460	817 T
C073	LW2-C073-B	1.6 J	11	2.8	5.9	2.6	4.3	54	82.2 JT
C073	LW2-C073-C	59	100	25	45	55	110	340	734 T
C073	LW2-C073-D	130	430	150	310	320	420	3800	5560 T
C074	LW2-C074-B	2.4 J	5.3	3	4.5	3.6	0.58 U	17	35.8 JT
C074	LW2-C074-C	2.1 J	1.7 J	1.5 J	2.7	0.75 J	0.48 U	10	18.8 JT
C074	LW2-C074-D	1.8 J	4.4	3.2	4	3.5	0.51 U	6.8	23.7 JT
C074	LW2-C074-F	0.88 J	0.22 U	0.3 U	0.3 U	0.26 U	0.48 U	0.45 U	0.88 JT
C077	LW2-C077-C	840	1100	150	440	580	560	2700	6370 T
C077	LW2-C077-D	0.79 J	0.99 J	4.9	3.4	0.7 J	1.9 J	6.2	18.9 JT

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
C086	LW2-C086-B	6.5	14	7.9	31	11	12	94	176 T
C086	LW2-C086-C	0.42 U	0.2 U	0.27 U	0.27 U	0.24 U	0.42 U	0.59 J	0.59 JT
C086	LW2-C086-D						0.4 U		
C093	LW2-C093-B	40	110	71	170	89	85	820	1390 T
C093	LW2-C093-C	0.47 U	0.53 J	0.66 J	0.49 J	0.31 J	0.48 U	1.9 J	3.89 JT
C105	LW2-C105-B	22	28	15	27	21	86	180	379 T
C105	LW2-C105-C	0.91 J	0.25 U	0.34 U	0.34 U	0.29 U	13 U	0.62 J	1.53 JT
C111-1	LW2-C111-B	18	24	9.4	22	18	40	78	209 T
C111-1	LW2-C111-C	69	120	17	51	70	120	260	707 T
C111-1	LW2-C111-F	64	63	100	150	79	350	780	1590 T
C111-2	LW2-C111-B2	18	25	12	32	19	58	130	294 T
C111-2	LW2-C111-C2	710	690	100	520	640	310	2900	5870 T
C111-2	LW2-C111-E2	75	140	77	180	100	180	850	1600 T
C112	LW2-C112-B	49	31	20	41	25	99	140	405 T
C112	LW2-C112-C	85	250	480	620	210	220	3200	5070 T
C112	LW2-C112-D	290	550	130	510	470	570	3100	5620 T
C121	LW2-C121-B	200	830	120	340	370	370	4400	6630 T
C121	LW2-C121-C	320	1400	240	720	1000	780	11000	15500 T
C121	LW2-C121-D						0.49 U		
C122	LW2-C122-B	78	200	58	120	190	170	1100	1920 T
C122	LW2-C122-C	200	700	180	340	550	470	5000	7440 T
C130	LW2-C130-B	410	1900	500	2100	1500	1100	16000	23500 T
C130	LW2-C130-C	2.6	2.4 J	2.8	7.5	3	23	45	86.3 JT
C130	LW2-C130-E	1.6 J	0.4 J	0.32 U	0.32 U	0.3 J	14	1.1 J	17.4 JT
C133	LW2-C133-B	6.5	7.6	3.9	9.6	7.3	13	41	88.9 T
C133	LW2-C133-D	85	140	72	170	120	110	780	1480 T
C135	LW2-C135-B	7	11	4.2	12	9.4	13	84	141 T
C135	LW2-C135-C	19	38	40	60	32	42	210	441 T
C136	LW2-C136-B	75	160	39	110	98	110	650	1240 T
C136	LW2-C136-C	280	310	100	420	280	190	2200	3780 T
C136	LW2-C136-D	1200	2300	320	3200	1700	680	18000	27400 T
C138	LW2-C138-C	0.9 J	1.3 J	0.47 J	1.2 J	1.1 J	1.2 U	7.6	12.6 JT
C139	LW2-C139-B	7.6	30	9.5	20	21	27	99	214 T
C139	LW2-C139-C	8.8	24	16	48	32	20	250	399 T
C142	LW2-C142-B	130	560	120	460	400	270	3100	5040 T
C142	LW2-C142-C	2000	5700	630	10000	4900	1800	52000	77000 T
C144	LW2-C144-B	13	27	47	53	23	45	140	348 T
C144	LW2-C144-D	16	67	69	72	40	60	310	634 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**								
C144	LW2-C144-E						0.48 U		
C147	LW2-C147-B	160	430	110	540	380	230	2800	4650 T
C147	LW2-C147-C	1100	2100	190	2000	1300	730	11000	18400 T
C147	LW2-C147-E	2100	4600	550	12000	4000	1300	48000	72600 T
C148	LW2-C148-B	3.9	8.7	4.7	10	6.6	7.2	44	85.1 T
C148	LW2-C148-C	15	16	11	23	13	37	84	199 T
C148	LW2-C148-E						0.56 U		
C152	LW2-C152-B	16	25	21	39	20	46	120	287 T
C152	LW2-C152-C	67	230	32	83	140	89	530	1170 T
C152	LW2-C152-E						0.47 U		
C155	LW2-C155-B	22	24	27	51	30	84	250	488 T
C155	LW2-C155-C	11	80	39	83	34	92	660	999 T
C155	LW2-C155-D						0.5 U		
C156	LW2-C156-B	40	86	26	74	62	73	320	681 T
C156	LW2-C156-C	67	290	45	150	170	86	780	1590 T
C156	LW2-C156-F						0.45 U		
C157	LW2-C157-B	210	670	180	540	440	700	3600	6340 T
C157	LW2-C157-C	58	110	72	160	84	220	770	1470 T
C158	LW2-C158-B	22	33	17	40	31	40	190	373 T
C158	LW2-C158-C	44	280	42	93	140	78	480	1160 T
C158	LW2-C158-D	44	150	52	100	100	86	900	1430 T
C158	LW2-C158-E						0.46 U		
C160	LW2-C160-B	73	200	83	140	130	180	960	1770 T
C160	LW2-C160-C	79	180	91	210	110	330	1200	2200 T
C161	LW2-C161-B	97	170	86	200	120	310	1100	2080 T
C161	LW2-C161-C	20	42	29	71	41	98	430	731 T
C161	LW2-C161-D						0.5 U		
C162	LW2-C162-B	30	47	31	73	38	54	260	533 T
C162	LW2-C162-C	58	170	75	110	120	120	760	1410 T
C162	LW2-C162-D						0.46 U		
C163-1	LW2-C163-B1	0.58 J	1.8 J	3	9.3	1.9 J	1.4 J	45	63 JT
C163-1	LW2-C163-C1	38	92	57	190	100	190	1200	1870 T
C163-1	LW2-C163-D1						0.51 U		
C163-2	LW2-C163-B2	6.85 T	26 T	4.45 T	15.8 T	14.8 T	8.7 T	96.5 T	173 T
C163-2	LW2-C163-C2	36 T	76.5 T	58 T	160 T	78 T	180 T	800 T	1390 T
C163-2	LW2-C163-D2						0.51 UT		
C164	LW2-C164-B	2.9	4.8	3.8	5.4	2.2 J	17	17	53.1 JT
C164	LW2-C164-C	5.3	14	11	9.4	6.5	39	37	122 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
C164	LW2-C164-E	1500	1900	83	650	1400	780	4100	10400 T
C166	LW2-C166-B	3.1 J	19	25	34	17	14	130	242 JT
C166	LW2-C166-C	64	610	140	360	350	130	2200	3850 T
C166	LW2-C166-D	250	940	150	600	530	390	3800	6660 T
C169	LW2-C169-B	30	76	31	76	47	120	230	610 T
C169	LW2-C169-C	97	230	57	130	160	210	750	1630 T
C169	LW2-C169-D						0.53 U		
C170	LW2-C170-B	42	95	56	120	81	140	810	1340 T
C170	LW2-C170-C	12	43	20	48	21	50	280	474 T
C170	LW2-C170-D						0.45 U		
C171	LW2-C171-B	54	150	33	110	110	130	620	1210 T
C171	LW2-C171-C	150	350	50	120	200	880	920	2670 T
C171	LW2-C171-D						0.9 U		
C172	LW2-C172-B	25	64	17	43	41	37	180	407 T
C172	LW2-C172-C	130	610	97	360	490	240	2300	4230 T
C172	LW2-C172-E						0.49 U		
C173	LW2-C173-B	11	24	12	31	17	37	110	242 T
C173	LW2-C173-C	43	130	33	69	77	90	460	902 T
C173	LW2-C173-E						0.48 U		
C176	LW2-C176-B	58	220	31	580	190	110	920	2110 T
C176	LW2-C176-C	1.8 J	2.7	2.7	5	1.6 J	0.53 U	13	26.8 JT
C176	LW2-C176-G	0.47 J	0.22 U	0.3 U	0.3 U	0.26 U	0.47 U	0.44 U	0.47 JT
C179	LW2-C179-B	990	4400	400	3700	2500	1400	20000	33400 T
C179	LW2-C179-C	460	2300	450	2600	1400	1900	16000	25100 T
C179	LW2-C179-D	310	2100	340	2900	1300	1300	15000	23300 T
C182	LW2-C182-B	190	2100	270	1100	1100	490	5900	11200 T
C182	LW2-C182-C	300	620	130	560	450	460	3100	5620 T
C184	LW2-C184-B	52	470	83	130	260	120	1000	2120 T
C184	LW2-C184-C	270	5400	1100	6500	4300	660	36000	54200 T
C184	LW2-C184-D	30	100	53	82	65	230	770	1330 T
C184	LW2-C184-E						0.5 U		
C185	LW2-C185-B	100	610	100	330	430	180	2800	4550 T
C185	LW2-C185-C	190	1300	280	1300	1200	640	11000	15900 T
C185	LW2-C185-D						0.52 J		
C192	LW2-C192-B	87	190	49	130	130	190	730	1510 T
C192	LW2-C192-C	980	3400	610	2400	1900	1100	15000	25400 T
C192	LW2-C192-D	41	320	73	260	78	180	1700	2650 T
C196	LW2-C196-B	23	47	46	58	51	54	590	869 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
C196	LW2-C196-C	2.3 J	4.3	4.9	4.4	2.9	7.5	25	51.3 JT
C197	LW2-C197-B	130	380	91	360	330	210	2000	3500 T
C197	LW2-C197-C	280	1800	170	650	900	670	6200	10700 T
C197	LW2-C197-D	0.86 U	1.3 U	0.63 J	2.1 J	0.84 U	2.7 U	8	10.7 JT
C199	LW2-C199-B	62	200	64	160	140	190	900	1720 T
C199	LW2-C199-C	2.1	3.3	3.5	5.1	2.7	8.3	27	52 T
C199	LW2-C199-E						0.48 U		
C202	LW2-C202-B	540	1500	71	590	990	780	2800	7270 T
C202	LW2-C202-C	560	6300	300	2100	2000	1200	9500	22000 T
C202	LW2-C202-D						0.44 U		
C203	LW2-C203-B	24	110	37	130	100	64	560	1030 T
C203	LW2-C203-C	650	1100	220	760	980	1300	4500	9510 T
C203	LW2-C203-E	29	35	27	61	32	120	230	534 T
C206	LW2-C206-B	160	1100	100	660	860	240	3500	6620 T
C206	LW2-C206-C	0.76 J	2 J	0.36 J	0.65 J	1.1 J	0.43 U	4.6	9.47 JT
C206	LW2-C206-D						0.42 U		
C207-1	LW2-C207-B	270	1500	220	660	590	440	3300	6980 T
C207-1	LW2-C207-C	110	550	31	140	260	390	1300	2780 T
C207-1	LW2-C207-D	42	33	68	63	51	200	350	807 T
C207-2	LW2-C207-B2	230 T	2100 T	350 T	1300 T	1300 T	580 T	7500 T	13400 T
C207-2	LW2-C207-C2	40.5 T	43 T	63.5 T	72 T	59 T	195 T	395 T	868 T
C210	LW2-C210-B	2.7	12	1.5 J	3.5	3.5	4.8	29	57 JT
C210	LW2-C210-C	0.6 J	1.3 J	0.31 U	0.31 U	0.49 J	17	1.3 J	20.7 JT
C210	LW2-C210-E						0.51 UJ		
C213	LW2-C213-B	1.8 J	1.3 J	1.5 J	1.6 J	0.9 J	0.44 U	6.1	13.2 JT
C213	LW2-C213-C	9.4	6.8	14	34	9.8	59	120	253 T
C213	LW2-C213-D	0.57 J	0.25 J	0.63 J	0.92 J	0.35 J	0.47 U	4	6.72 JT
C215	LW2-C215-B	1.7 U	1.8 J	1.3 J	2.2 J	1.2 U	3.8	12	21.1 JT
C215	LW2-C215-C	4.4	0.69 J	0.29 U	0.37 J	0.36 J	100	2.2 U	106 JT
C220	LW2-C220-B	9.8	1100	320	950	870	50	3100	6400 T
C220	LW2-C220-C	4.3	48	100	190	32	18	280	672 T
C221	LW2-C221-B	370	6000	950	5900	3700	210	26000	43100 T
C221	LW2-C221-C	28	1700	300	1800	1200	89	8300	13400 T
C228	LW2-C228-B	160	1700	280	1900	1300	500	12000	17800 T
C231	LW2-C231-B	360	4600	440	5300	3300	620	27000	41600 T
C231	LW2-C231-C	48	270	68	400	200	170	2700	3860 T
C232	LW2-C232-B	21 J	10 J	2.5 J	3.4 J	4.5 J	210 J	26 J	277 JT
C232	LW2-C232-C	13 J	8.9 J	2.9 J	17 J	8.8 J	100 J	83 J	234 JT

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**								
C240	LW2-C240-B	56	280	130	210	230	140	1200	2250 T
C240	LW2-C240-D	580	4300	610	6600	3700	1800	30000	47600 T
C240	LW2-C240-E	260	1500	490	1100	880	1500	7800	13500 T
C244	LW2-C244-B	34	40	32	82	39	61	290	578 T
C244	LW2-C244-C	590	340	45	200	330	840	860	3210 T
C245	LW2-C245-B	180	2900	510	2700	2100	420	10000	18800 T
C245	LW2-C245-C	15	54	15	43	23	65	200	415 T
C245	LW2-C245-D	26	68	39	120	62	140	480	935 T
C245	LW2-C245-E	6.9	16	11	31	11	34	160	270 T
C247	LW2-C247-B	11	1.6 J	0.31 U	0.91 J	1.6 J	32	4.3	51.4 JT
C247	LW2-C247-C	0.59 J	0.23 U	0.32 U	0.32 U	0.28 U	5 U	0.99 J	1.58 JT
C247	LW2-C247-D	0.5 J	0.23 U	0.31 U	0.31 U	0.27 U	4.6 U	0.47 U	0.5 JT
C252	LW2-C252-B	29	630	240 J	480 J	310 J	86	1700	3480 JT
C252	LW2-C252-C	17	420	98	270	180	45	980	2010 T
C254	LW2-C254-B	58	68	24	67	52	230	190	689 T
C254	LW2-C254-C	1.3 J	0.76 J	0.82 J	1.4 J	0.67 J	5.1 U	3.7	8.65 JT
C255	LW2-C255-B	0.76 U	0.42 U	0.29 U	0.41 J	0.4 U	2.7 U	1.5 J	1.91 JT
C255	LW2-C255-C	0.55 U	0.21 U	0.29 U	0.29 U	0.25 U	1.7 U	0.43 U	1.7 UT
C257	LW2-C257-B	340	680	70	420	480	720	2000	4710 T
C258	LW2-C258-B	97	3500	3600	5200	1800	360	1800	16400 T
C258	LW2-C258-C	340	18000	2900	12000	11000	860	41000	86100 T
C260	LW2-C260-B	34	53	25	35	22	120	310	599 T
C260	LW2-C260-C	8.9	12	15	14	6.1	29	77	162 T
C263	LW2-C263-B	4400	7300	940	8900	5300	21000	68000	116000 T
C263	LW2-C263-C						120000		
C263	LW2-C263-D	30000	37000	1700	36000	22000	7900	90000	225000 T
C264	LW2-C264-B	34000	42000	3200	43000	27000	160000	190000	499000 T
C264	LW2-C264-C	540	8800	160 J	15000	4600	610	51000	80700 JT
C264	LW2-C264-D						0.6 J		
C266	LW2-C266-B	0.4 J	0.19 U	0.26 U	0.26 U	0.23 U	1 U	0.41 J	0.81 JT
C266	LW2-C266-C	0.41 U	0.19 U	0.27 U	0.27 U	0.23 U	0.97 U	0.4 U	0.97 UT
C267	LW2-C267-B	120	220	17	78	70	300	430	1240 T
C267	LW2-C267-C	1.9 J	4.4	0.69 J	1.4 J	1.2 J	6.7	5.9	22.2 JT
C268	LW2-C268-B	0.66 J	0.19 J	0.24 U	0.24 U	0.21 U	2.3 U	0.6 J	1.45 JT
C268	LW2-C268-C	0.54 J	0.18 U	0.25 U	0.25 U	0.21 U	2 U	0.37 U	0.54 JT
C269	LW2-C269-B	1500	2100	270	2100	1400	450	11000	18800 T
C269	LW2-C269-C	7800	8900	370	7500	5000	920	33000	63500 T
C269	LW2-C269-F	2900	11000	570	12000	5900	2200	64000	98600 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**								
C270	LW2-C270-B	1600	20000	2500	21000	13000	3200	94000	155000 T
C270	LW2-C270-C	900	14000	1100	10000	8100	1600	54000	89700 T
C272	LW2-C272-B	0.51 J	0.27 J	2.1 J	18	2.9	1 J	2.4 J	27.2 JT
C272	LW2-C272-C	3.3	1.2 J	26	15	1.2 J	12	3.6	62.3 JT
C273	LW2-C273-B	26000	80000	6600	95000	43000	31000	490000	772000 T
C273	LW2-C273-C	13000	46000	3200	31000	15000	52000	150000	310000 T
C273	LW2-C273-D						0.6 J		
C276	LW2-C276-B	8000	14000	1500	8300	7300	2800	42000	83900 T
C276	LW2-C276-C	570000	360000	260000	320000	300000	4000000	1900000	7710000 T
C276	LW2-C276-D						110		
C277	LW2-C277-B	27	85	8.1	35	58	41	120	374 T
C277	LW2-C277-C	850	1100	22	390	950	120	2100	5530 T
C277	LW2-C277-D	850	830	38	250	610	430	1700	4710 T
C278	LW2-C278-B	9600	16000	1900	9900	8200	15000	50000	111000 T
C278	LW2-C278-C	50000	77000	3500	37000	31000	56000	160000	415000 T
C278	LW2-C278-D	8.1	35	5.5	22	17	13	120	221 T
C280	LW2-C280-B	45	100	28	67	83	110	570	1000 T
C280	LW2-C280-C	160	170	74	240	150	210	840	1840 T
C280	LW2-C280-D	62	82	47	120	46	180	330	867 T
C282	LW2-C282-B	1.9	1.5 J	2.8	1.6	1.4 J	13 U	8.1	17.3 JT
C282	LW2-C282-C	0.54 J	0.2 U	0.28 U	0.52 J	0.24 U	4.6 U	2.2	3.26 JT
C282	LW2-C282-D	0.44 U	0.21 U	0.29 U	0.29 U	0.25 U	4.4 U	0.43 U	4.4 UT
C283	LW2-C283-B	97000 J	98000 J	4300 J	51000 J	52000 J	510000	260000 J	1070000 JT
C283	LW2-C283-C	21000 J	34000 J	1800 J	23000 J	15000 J	400000	150000 J	645000 JT
C283	LW2-C283-E	14 J	7.7 J	5.3 J	17 J	4.7 J	83 J	29 J	161 JT
C284	LW2-C284-B	35000	40000	4900	28000	28000	44000	150000	330000 T
C284	LW2-C284-C	560000	600000	91000	370000	320000	4400000	2100000	8440000 T
C284	LW2-C284-D	780	2900	680	2500	1900	21000	17000	46800 T
C284	LW2-C284-E						47 J		
C288	LW2-C288-B	26000	76000	4900	67000	36000	48000	370000	628000 T
C288	LW2-C288-C	6300	28000	2100	23000	12000	3000	120000	194000 T
C288	LW2-C288-D	1100	12000	1200	13000	5000	2400	62000	96700 T
C289	LW2-C289-B	33000	27000	3000	28000	20000	17000	130000	258000 T
C289	LW2-C289-C	14000	35000	2700	22000	17000	1200	100000	192000 T
C289	LW2-C289-E	1.2 J	1.2 J	1.2 J	3.4	1.5 J	0.47 UJ	19	27.5 JT
C290	LW2-C290-B	11	98	2.5 J	19	37	16	170	354 JT
C290	LW2-C290-C	0.61 J	0.96 J	0.31 U	0.44 J	0.45 J	2.2 U	2.2 J	4.66 JT
C291	LW2-C291-B	7.2	9.6	4.9	14	7.6	22 U	33	76.3 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
C291	LW2-C291-C	500	380	9.6	120	260	40	830	2140 T
C293-1	LW2-C293-B	8700	6000	45	2000	4500	250	9400	30900 T
C293-1	LW2-C293-C	11000	5900	63	840	3500	1900	7200	30400 T
C293-1	LW2-C293-D	55	59	48	56	59	180	350	807 T
C293-2	LW2-C293-B2	7400	9300	130	2300	6400	980	16000	42500 T
C293-2	LW2-C293-C2	29	37	42	33	25	120	150	436 T
C294	LW2-C294-B	550000	530000	21000	280000	230000	2200000	1400000	5210000 T
C294	LW2-C294-C	6300	24000	1400	22000	12000	64000 J	93000	223000 JT
C294	LW2-C294-D	130	590	97	450	220	600	2400	4490 T
C295	LW2-C295-B	33	160	12	57	120	65	330	777 T
C295	LW2-C295-C	800	2600	280	1300	2000	1700	7700	16400 T
C299	LW2-C299-B	160000	130000	6000	46000	53000	1100000	300000	1800000 T
C299	LW2-C299-C	230000	240000	13000	99000	100000	1300000	590000	2570000 T
C3002	LW2-C300-B	3.3 U	12	8.9	11	7.6	0.65 U	100	140 T
C3002	LW2-C300-C	13	140	34	49	68	32	740	1080 T
C3002	LW2-C300-D	36	470	95	360	340	110	3200	4610 T
C301	LW2-C301-B	620000 J	700000 J	24000 J	260000 J	250000 J	1700000 J	1300000 J	4850000 JT
C301	LW2-C301-C	1800000 J	2600000 J	240000 J	1100000 J	1300000 J	18000000	5400000 J	30400000 JT
C301	LW2-C301-D	750000 J	230000 J	430000 J	310000 J	270000 J	3800000 J	1900000 J	7690000 JT
C301	LW2-C301-E	1200000 J	260000 J	1500000 J	730000 J	730000 J	11000000	3900000 J	19300000 JT
C301	LW2-C301-G	58000 J	66000 J	56000 J	56000 J	52000 J	1000000	460000 J	1750000 JT
C302	LW2-C302-B	48000 J	52000 J	4300 J	41000 J	33000 J	47000 J	220000 J	445000 JT
C302	LW2-C302-C	3800000	3900000	940000	1300000	1500000	20000000	8500000	39900000 T
C302	LW2-C302-D						2900000		
C305-1	LW2-C305-B1	13000	21000	2600	19000	13000	1100	92000	162000 T
C305-1	LW2-C305-C1	120	1000	190	870	650	180	4300	7310 T
C305-1	LW2-C305-D1	74	540	49	500	360	200	3800	5520 T
C305-2	LW2-C305-B2	59000	47000	4600	40000	27000	47000 J	170000	395000 JT
C305-2	LW2-C305-C2	30000	32000	3200	24000	17000	49000	98000	253000 T
C305-2	LW2-C305-D2	16	66	43	88	50	29	330	622 T
C311	LW2-C311-B	1100 J	8200 J	1200 J	11000 J	6000 J	410 J	62000 J	89900 JT
C311	LW2-C311-C	120 J	500 J	92 J	880 J	400 J	190 J	6800 J	8980 JT
C311	LW2-C311-E	48 J	110 J	63 J	170 J	67 J	290 J	1100 J	1850 JT
C313	LW2-C313-B	1 J	30	4.3	13	17	3.3	120	189 JT
C313	LW2-C313-C	0.49 U	0.79 J	0.32 U	0.87 J	0.53 J	0.5 U	2.9	5.09 JT
C314	LW2-C314-B	74	800	61	220	630	170	2700	4660 T
C314	LW2-C314-C	190	1300	150	1100	940	270	7600	11600 T
C314	LW2-C314-D						0.49 U		

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
C316	LW2-C316-B	46000	60000	360	110000	60000	16000	160000	452000 T
C316	LW2-C316-C	200	2700	700	3600	2500	400	20000	30100 T
C316	LW2-C316-D	15000	27000	1500	21000	18000	1600	120000	204000 T
C323	LW2-C323-B	51	140	27	59	78	92	410	857 T
C323	LW2-C323-C	7.6	48	4.9	8	25	14	58	166 T
C323	LW2-C323-D	13	54	6	56	51	31	210	421 T
C323	LW2-C323-E						0.52 U		
C324	LW2-C324-B	28	55	8.7	14	20	19	70	215 T
C324	LW2-C324-D	17	69	16	33	22	44	280	481 T
C324	LW2-C324-E	110	760	83	610	490	270	3000	5320 T
C326	LW2-C326-B	28	85	32	66	42	28	250	531 T
C326	LW2-C326-C	0.55 J	0.69 J	0.38 J	1.3 J	0.45 J	0.44 U	2 J	5.37 JT
C326	LW2-C326-D						0.46 U		
C327	LW2-C327-B	39	320	12	410	110	84	770	1750 T
C327	LW2-C327-C	31	150	12	36	47	48	310	634 T
C327	LW2-C327-D						0.48 U		
C329	LW2-C329-B	49	4000	17	1000	1900	25	7000	14000 T
C329	LW2-C329-C	6000	28000	180	12000	22000	960	69000	138000 T
C329	LW2-C329-D	6800	20000	130	16000	27000	2300	92000	164000 T
C331	LW2-C331-B	18 J	13 J	5.8 J	15 J	8.1 J	100 J	39 J	199 JT
C331	LW2-C331-C	7.7 J	41 J	4.6 J	10 J	4 J	62 J	17 J	146 JT
C331	LW2-C331-D	11 J	73 J	3.1 J	3 J	2.8 J	96 J	4.9 J	194 JT
C331	LW2-C331-E	1.8 J	0.66 J	0.37 J	0.33 UJ	0.41 J	0.52 U	1.1 J	4.34 JT
C331	LW2-C331-G						0.57 U		
C332	LW2-C332-B	36	50	22	49	47	64	300	568 T
C332	LW2-C332-C	0.44 U	0.21 U	0.29 U	0.29 U	0.25 U	0.72 J	1 J	1.72 JT
C332	LW2-C332-D						0.43 U		
C333	LW2-C333-B	19	52	30	70	27	37	230	465 T
C333	LW2-C333-C	9.7	13	5.2	8.6	5.6	21	24	87.1 T
C333	LW2-C333-E	1.5 J	0.74 J	0.31 U	0.85 J	0.64 J	6.6	4.7	15 JT
C333	LW2-C333-G						0.46 U		
C334	LW2-C334-B	40	88	23	60	74	80	270	635 T
C334	LW2-C334-C	1.9	1.7	1.4 J	2.2	1.7	5.1	8	22 JT
C334	LW2-C334-D						0.49 U		
C335	LW2-C335-B	7.4	11	17	34	11	20	52	152 T
C335	LW2-C335-C	15	92	36	75	32	95	470	815 T
C335	LW2-C335-E						0.5 J		
C341	LW2-C341-B	3.2	4.3	2.9	5.3	3.4	9.2	19	47.3 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
C342	LW2-C342-B	18	30	11	32	38	46	180	355 T
C342	LW2-C342-C	17	28	11	25	28	40	120	269 T
C342	LW2-C342-D	28	28	59	68	29	150	190	552 T
C346	LW2-C346-B	24	33	27	29	36	66	150	365 T
C346	LW2-C346-C	28	28	45	32	25	150	150	458 T
C347	LW2-C347-B	17	21	15	41	28	45	140	307 T
C347	LW2-C347-C	41	720	36	140	450	110	950	2450 T
C347	LW2-C347-F	0.46 U	0.22 U	0.3 U	0.3 U	0.26 U	1.6 U	0.75 J	0.75 JT
C348	LW2-C348-B	33	82	19	81	61	76	360	712 T
C348	LW2-C348-C	520	1400	75	440	930	550	3700	7620 T
C348	LW2-C348-D	7.2	8.3	20	26	8.6	0.5 U	70	140 T
C349	LW2-C349-B	7.5	11	14	27	6.5	19	94	179 T
C349	LW2-C349-C	9.9	6.6	2.8	9	7	19	38	92.3 T
C351	LW2-C351-B	49	120	140	560	120	140	1000	2130 T
C351	LW2-C351-C	2.9	13	21	85	15	11 U	210	347 T
C351	LW2-C351-D	0.45 J	0.21 U	0.41 J	0.64 J	0.25 U	4.7 U	1.8	3.3 JT
C351	LW2-C351-E	0.49 J	0.23 J	0.3 U	0.3 U	0.26 U	5.1 U	0.97 J	1.69 JT
C352	LW2-C352-B	2.3 J	2.7	1.9 J	4.6	2.8	5.4 U	15	29.3 JT
C352	LW2-C352-C	2.1 J	2.8	1.7 J	3.2	2.7	5.3 U	12	24.5 JT
C352	LW2-C352-D	1.8 J	3.9	1.4 J	2.4 J	1.6 J	4.6 U	13	24.1 JT
C356	LW2-C356-B	11 J	10 J	9.4 J	16 J	8.7 J	60 J	59 J	174 JT
C356	LW2-C356-C	40 J	110 J	27 J	170 J	110 J	170 J	190 J	817 JT
C356	LW2-C356-E	10 J	7.1 J	4 J	8.2 J	4.3 J	48 J	21 J	103 JT
C357	LW2-C357-B	4.7	6.2	3.6	6.6	6.8	13	33	73.9 T
C357	LW2-C357-C	9.1	4.5	2.5	3.4	3.8	22	16	61.3 T
C359	LW2-C359-B	6.9	6.3	3.6	8.9	7.4	12	35	80.1 T
C359	LW2-C359-C	40	19	11	25	23	30	100	248 T
C359	LW2-C359-D	250	35	31	44	55	100	430	945 T
C361	LW2-C361-B	7.9	7.6	3.1	7.3	8.3	14	31	79.2 T
C362	LW2-C362-B	7.2	13	5.3	14	13	12	70	135 T
C362	LW2-C362-C	73	7.7	2.6	5.4	7.3	13	41	150 T
C362	LW2-C362-D	40	6.8	3.3	5.9	7.6	12	50	126 T
C364	LW2-C364-B	24	35	29	70	27	74	260	519 T
C364	LW2-C364-C	55	91	100	150	50	200	630	1280 T
C366-1	LW2-C366-B1	45.5 T	79.5 T	28 T	135 T	119 T	30 T	685 T	1120 T
C366-1	LW2-C366-C1	240 T	54 T	15 T	38.5 T	72 T	68.5 T	475 T	963 T
C366-1	LW2-C366-D1	12.5 T	6.2 T	6 T	11.4 T	10.5 T	15 UT	74 T	121 T
C366-1	LW2-C366-E1	7.65 T	7.35 T	9.35 T	18 T	6.15 T	19 UT	56 T	105 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
C366-1	LW2-C366-G1	0.585 JT	0.22 UT	0.39 JT	0.3 UT	0.26 UT	4.9 UT	0.745 JT	1.72 JT
C366-2	LW2-C366-B2	8.9	39	6.9	26	47	21 U	260	388 T
C366-2	LW2-C366-C2	370	54	23	63	85	80	490	1170 T
C366-2	LW2-C366-D2	33	29	27	80	40	33	340	582 T
C366-2	LW2-C366-F2	2.5	0.51 J	2.4	4	0.82 J	15 U	6.6	16.8 JT
C368	LW2-C368-B	6.1	13	3.1	7.1	5.1	6.9 U	23	57.4 T
C368	LW2-C368-C	290	51	26	48	100	53	400	968 T
C368	LW2-C368-D	7	22	5.6	130	37	7 U	240	442 T
C368	LW2-C368-E	41	18	20	51	30	41 U	160	320 T
C371	LW2-C371-B	9.4	15	5.7	16	12	15 U	120	178 T
C371	LW2-C371-C	3.4	4.9	4.8	32	4	10 U	56	105 T
C371	LW2-C371-E	7	4.4	9.4	12	5.1	30	46	114 T
C372	LW2-C372-B	14	18	20	45	13	39	140	289 T
C372	LW2-C372-C	18	20	13	27	16	61	140	295 T
C373	LW2-C373-B	1.2 J	1.2 J	1.2 J	1.5 J	1 J	4 U	7.7	13.8 JT
C373	LW2-C373-C	4.9	9.6	6.1	11	8.9	20	52	113 T
C377	LW2-C377-B	2.7	2.9	3.8	6.2	2.6	10 U	26	44.2 T
C377	LW2-C377-C	17	8.7	5.4	5.4	14	13 U	60	111 T
C377	LW2-C377-E	98	240	77 U	160	480	170	1500	2650 T
C379	LW2-C379-B	6.2	9.4	5.6	14	8.7	15 U	57	101 T
C379	LW2-C379-C	17	10	16	19	14	45	85	206 T
C379	LW2-C379-D	0.51 U	0.24 U	0.33 U	0.33 U	0.29 U	3.4 U	0.65 J	0.65 JT
C380	LW2-C380-B	0.58 U	0.27 U	0.41 J	0.37 J	0.32 U	5.3 U	1.9 J	2.68 JT
C380	LW2-C380-C	0.55 U	0.26 U	0.36 U	0.36 U	0.31 U	4.9 U	0.63 J	0.63 JT
C382	LW2-C382-B	6.7	24	9.6	12	5.8	16	140	214 T
C382	LW2-C382-C	0.65 J	0.24 U	0.34 J	0.33 U	0.28 U	2.2 U	2 J	2.99 JT
C383	LW2-C383-B	13	7.4	4.8	7.6	6.6	13	110	162 T
C383	LW2-C383-C	0.52 U	0.25 U	0.34 U	0.34 U	0.29 U	1.8 U	1.2 J	1.2 JT
C384	LW2-C384-B	320	870	94	1200	1000	590	6300	10400 T
C384	LW2-C384-C	3.3 U	7.6	2.7	15	8.6	6.4 U	90	124 T
C386	LW2-C386-B	17	13	7.5	19	16	29	80	182 T
C386	LW2-C386-C	0.57 U	0.27 U	0.37 U	0.37 U	0.32 U	3.2 U	0.71 J	0.71 JT
C388	LW2-C388-B	0.51 U	0.24 U	0.33 U	0.33 U	0.29 U	3.6 U	0.5 U	3.6 UT
C388	LW2-C388-C	0.55 U	0.26 U	0.36 U	0.36 U	0.31 U	3.4 U	0.53 U	3.4 UT
C392	LW2-C392-B	32	130	28	190	140	48	1000	1570 T
C392	LW2-C392-C	12	5	8.1	17	6.9	23	46	118 T
C393	LW2-C393-B	10	65	13	56	50	22	280	496 T
C393	LW2-C393-C	0.47 J	0.22 U	0.33 J	0.3 U	0.26 U	2 U	0.47 J	1.27 JT

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
C396	LW2-C396-B	0.85 J	0.47 J	0.33 U	0.33 U	0.29 U	2.2 U	0.99 J	2.31 JT
C396	LW2-C396-C	0.52 U	0.25 U	0.34 U	0.34 U	0.29 U	2 U	0.5 U	2 UT
C397	LW2-C397-B	8.6	13	7.3	16	13	20 U	71	129 T
C397	LW2-C397-C	8.3 J	16 J	7.1 J	18 J	13 J	19 J	69 J	150 JT
C397	LW2-C397-D	15 J	11 J	14 J	19 J	13 J	31 J	79 J	182 JT
C400	LW2-C400-B	3.2 J	5	4 J	8.7	3.4 J	10	29	63.3 JT
C400	LW2-C400-C	2.9 U	3.2	3.4	6.7	3.8	14 U	31	48.1 T
C401	LW2-C401-B	4.9	24	10	39	33	13 U	210	321 T
C401	LW2-C401-C	16	68	20 U	27	140	150	420	821 T
C401	LW2-C401-D	15	91	25 U	50	73	41 U	610	839 T
C401	LW2-C401-E	18	130	20 U	66	150	69	660	1090 T
C402	LW2-C402-B	4.9	56	5.7	67	42	5.7 U	370 J	546 JT
C402	LW2-C402-C	1 U	14	0.63 J	4	1.7 J	6 U	47	67.3 JT
C403	LW2-C403-B	6.8	4.2	9.3	8.6	4.8	0.49 U	46	79.7 T
C403	LW2-C403-C	0.6 J	0.21 U	0.63 J	0.34 J	0.25 U	0.45 U	0.89 J	2.46 JT
C403	LW2-C403-D	0.57 J	0.24 U	0.43 J	1.5 J	0.42 J	0.53 U	1.4 J	4.32 JT
C403	LW2-C403-F						0.57 U		
C405	LW2-C405-B	1.8 J	5.7	6.2	19	20	3.6 U	54	107 JT
C405	LW2-C405-C	18	23	13	56	32	29	220	391 T
C409	LW2-C409-B	35	23	5.8	750	83	29	300	1230 T
C409	LW2-C409-C	64	13	14	1300	150	46	520	2110 T
C413-1	LW2-C413-B1	13	8.4	11	9.5	7.6	30	43	123 T
C413-1	LW2-C413-C1	15	11	10	11	10	25	63	145 T
C413-2	LW2-C413-B2	19	12	12	15	13	39	78	188 T
C413-2	LW2-C413-C2	11	7.5	6.2	7.6	7.6	22	36	97.9 T
C413-2	LW2-C413-D2	38	31	18	27	35	60	150	359 T
C415	LW2-C415-B	6.3	15	1.5 J	15	4.5	14 U	62	104 JT
C415	LW2-C415-C	0.46 U	0.22 U	0.3 U	0.3 U	0.26 U	3.7 U	0.45 J	0.45 JT
C415	LW2-C415-D	0.47 U	7.4	0.33 J	0.31 U	0.9 J	5 U	1.6 J	10.2 JT
C417	LW2-C417-B	7.4	8.7	10	15	6.6	17	46	111 T
C417	LW2-C417-D	10	14	28	150	25	23	250	500 T
C420	LW2-C420-B	49	28	12	35	40	26	170	360 T
C420	LW2-C420-C	13	28	5	36	33	27	190	332 T
C421	LW2-C421-B	17	520	26	100	450	35 U	1800	2910 T
C421	LW2-C421-C	6.7	15	9.4	16	10	16 U	78	135 T
C425-1	LW2-C425-B1	8.8 T	24 T	5.8 T	11.5 T	15 T	15 T	76.5 T	157 T
C425-1	LW2-C425-C1	30.5 T	36.5 T	11 T	92.5 T	28.3 T	34 T	401 T	634 T
C425-1	LW2-C425-E1	16 T	19.5 T	8.5 T	12 T	15 T	18 T	74.5 T	164 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
C425-2	LW2-C425-B2	6	12	6.6	22	13	9.7 U	110	170 T
C425-2	LW2-C425-C2	5.2	8.4	3.3	4.8	2.2 J	9.4 U	22	45.9 JT
C425-2	LW2-C425-D2	28	33	11	29	24	18	160	303 T
C426	LW2-C426-B	13	18	11	15	12	27	72	168 T
C426	LW2-C426-C	0.56 J	0.26 J	0.44 J	0.44 J	0.29 J	2.1 U	1.6 J	3.59 JT
C430	LW2-C430-B	5.5	5.3	4.3	6.3	5.1	16 U	29	55.5 T
C430	LW2-C430-C	27	28	27	42	26	94	180	424 T
C430	LW2-C430-E	35	26	18	31	21	380	140	651 T
C431	LW2-C431-B	190	150	26	79	190	110	670	1420 T
C431	LW2-C431-C	39	25	37	48	24	80	290	543 T
C431	LW2-C431-D	7.9	5.2	8.5	18	6.7	25	57	128 T
C434	LW2-C434-B	35	44	34	53	41	96	270	573 T
C434	LW2-C434-C	2.8	1.5 J	2.4 J	2.7	1.6 J	12 U	10	21 JT
C434	LW2-C434-D	0.54 J	0.27 J	0.53 J	1.2 J	0.72 J	5 U	1.5 J	4.76 JT
C436	LW2-C436-B	2.7 U	7.2	1.8 J	5.1	7.2	7.7 U	26	47.3 JT
C436	LW2-C436-C	30	42	25	45	38	74	200	454 T
C437	LW2-C437-B	9.7	8.4	13	18	9.3	40	59	157 T
C437	LW2-C437-C	0.5 J	0.22 U	0.41 J	0.87 J	0.37 J	5 U	1.2 J	3.35 JT
C437	LW2-C437-D	0.53 J	0.22 U	0.31 U	0.31 U	0.27 U	5.3 U	0.52 J	1.05 JT
C439	LW2-C439-B	5.5 J	9.2	6	16 J	10	14	49	110 JT
C439	LW2-C439-C	15	13	8.4	20	14	33	70	173 T
C439	LW2-C439-E						0.47 U		
C440	LW2-C440-B	0.71 J	1.4 J	1.6 J	2.5	0.82 J	3 U	6.6	13.6 JT
C440	LW2-C440-C	6.3	11	4.8	15	11	16	63	127 T
C441-1	LW2-C441-B1	9.5	6	8.6	11	7.9	27	51	121 T
C441-1	LW2-C441-C1	0.49 U	0.23 U	0.32 U	0.32 U	0.27 U	0.5 U	0.66 J	0.66 JT
C441-1	LW2-C441-D1						0.5 U		
C441-2	LW2-C441-B2	13.7 T	24 T	12.1 T	28 T	18.5 T	31 T	131 T	258 T
C441-2	LW2-C441-C2	1.31 JT	0.84 JT	5.03 JT	8.24 JT	0.98 JT	0.5 UT	11.7 JT	28.1 JT
C441-2	LW2-C441-D2						0.47 UT		
C444	LW2-C444-B	12	18	14	34	18	21	140	257 T
C444	LW2-C444-C	9.2	8.3	8.9	16	7.7	21	54	125 T
C444	LW2-C444-E						0.5 U		
C445	LW2-C445-B	7.1	30	4.7	21	32	0.64 U	160	255 T
C445	LW2-C445-C	33	120	9.6	67	120	72	530	952 T
C445	LW2-C445-E	33	27	29	36	28	82	200	435 T
C447	LW2-C447-B	30	17	11	25	10	36	110	239 T
C447	LW2-C447-C	32	43	100	62	33	100	350	720 T

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	91-57-6	83-32-9	208-96-8	120-12-7	86-73-7	91-20-3	85-01-8	Low Molecular
	Chemical Name	2-Methylnaphthalene	Acenaphthene	Acenaphthylene	Anthracene	Fluorene	Naphthalene	Phenanthrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID								
C447	LW2-C447-D	7.9 J	22 J	14 J	39 J	11 J	48 J	92 J	234 JT
C448	LW2-C448-B	1.7 U	2 J	1.4 J	1.8 J	1.3 J	4.7 U	6.4	12.9 JT
C448	LW2-C448-C	4.6	9.9	5.7	17	9	7.4 U	49	95.2 T
C450	LW2-C450-B	2.6	4.6	0.87 J	2.2 J	5	5.9 U	17	32.3 JT
C450	LW2-C450-C	35	19	23	45	27	40	110	299 T
C453	LW2-C453-B	680	140	44	170	260	100	780	2170 T
C453	LW2-C453-C	170	80	33	72	90	95	390	930 T
C453	LW2-C453-D	17	19	20	28	19	44	110	257 T
C454	LW2-C454-B	13	11	8.2	12	8	30	70	152 T
C454	LW2-C454-C	23	18	38	26	18	110	130	363 T
C454	LW2-C454-D	20	21	42	34	16	110	120	363 T
C454	LW2-C454-E	4.7	5.2	11	13	3.5	23	34	94.4 T
C455	LW2-C455-B	7500	470	120 U	370	980	440	3800	13600 T
C455	LW2-C455-C	94	80	58	140	110	110 U	660	1140 T
C455	LW2-C455-D	48	42	39	61	35	100	260	585 T
C456	LW2-C456-B	1.8 U	3.1	2.3 J	6	2.4 J	8.4 U	19	32.8 JT
C456	LW2-C456-C	130	190	51	360	220	190	1400	2540 T
C456	LW2-C456-D	23	26	26	28	19	67	130	319 T
C456	LW2-C456-F	40	81	70	110	56	97	400	854 T
C457	LW2-C457-B	2.8 U	7.9	4.7	13 J	8.2	6.7 U	50	83.8 JT
C457	LW2-C457-C	130	270	46	380	330	130	2100	3390 T
C457	LW2-C457-E	17	22	21	25	17	56	100	258 T
C458-1	LW2-C458-B	1.8 J	2.3 J	3.4	2.7	2 J	6 U	9.2	21.4 JT
C458-1	LW2-C458-C	1.1 J	0.84 J	0.74 J	1.2 J	0.85 J	3.5 U	5.5	10.2 JT
C458-2	LW2-C458-B2	1.8 JT	2.55 JT	1.65 JT	2.85 JT	1.75 JT	5.2 UT	13 T	23.6 JT
C458-2	LW2-C458-C2	2 JT	1.7 JT	1.25 JT	1.85 JT	1.6 JT	5.9 UT	8.75 T	17.2 JT
C461	LW2-C461-B	2.7	2.9	3.2	5.9	3.7	6.2 U	31	49.4 T
C461	LW2-C461-C	4	5.6	2.9	7.3	7	8.3 U	40	66.8 T
C462	LW2-C462-B	1.5 J	3.8	1.2 J	2.6	1.6 J	5 U	14	24.7 JT
C462	LW2-C462-C	3.1	3.7	6	4.8	3.3	9.2 U	17	37.9 T
C468	LW2-C468-B	4.3	4.8	2.8	5.8	4.5	16 U	23	45.2 T
C468	LW2-C468-C	12	4	4.6	6	5.6	20	27	79.2 T
C471	LW2-C471-B	1.5 J	0.73 J	0.76 J	1.1 J	1 J	5 U	5.6	10.7 JT
C471	LW2-C471-C	1.8 J	1.5 J	1.3 J	2 J	1.6 J	5.5 U	9.1	17.3 JT
C474	LW2-C474-B	2.8	3.6	1.7 J	4.4	4.9	7.3 U	21	38.4 JT
C474	LW2-C474-C	2.6	3.6	1.6 J	2.6	2.6	9.4 U	13	26 JT

Table 4-9. Low Molecular Weight PAH Concentrations Used in LPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	**91-57-6**	**83-32-9**	**208-96-8**	**120-12-7**	**86-73-7**	**91-20-3**	**85-01-8**	**Low Molecular**
	Chemical Name	**2-Methylnaphthalene**	**Acenaphthene**	**Acenaphthylene**	**Anthracene**	**Fluorene**	**Naphthalene**	**Phenanthrene**	**Weight PAHs**
	Unit	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
Location	**Sample ID**								
C477	LW2-C477-B	3.7	7.9	6.7	12	7.3	11	47	95.6 T
C477	LW2-C477-C	31	47	33	81	46	34	250	522 T
C494	LW2-C494-B	4.9	6	13	19	8.1	12 U	70	121 T
C494	LW2-C494-C	22	35	17	49	31	40	160	354 T
C494	LW2-C494-D	100	470	220	410	160	420	2600	4380 T
C494	LW2-C494-E	27	370	79	440	100	200	3400	4620 T
C521	LW2-C521-B	12000	17000	1800	9400	7900	200000	47000	295000 T
C521	LW2-C521-C	510000	480000	79000	240000	210000	3600000	1100000	6220000 T
C521	LW2-C521-E	74	270	170	470	300	540 J	2400	4220 JT

Notes:

J The associated numerical value is an estimated quantity.

T The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

U The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	High Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**											
Beach Sediment Samples												
B001	LW2-B001	2.2 J	6.5	14	12	13	4.2	12	7.3	9.7	12	92.9 JT
B002	LW2-B002	1.5 J	3.8	6.6	7.4	7.5	2.2 J	3.6	3.6	6.4	5	47.6 JT
B003	LW2-B003	33	210	360	310	310	100	280	440	280	560	2880 T
B004	LW2-B004	13	43	82	99	110	31	80	41	98	59	656 T
B005	LW2-B005	15	77	150	120	150	38	100	99	130	160	1040 T
B006	LW2-B006	0.31 U	1.8 J	1.3 J	3.1	1.6 J	1.1 J	1.6 J	3.7	1.2 J	4.3	19.7 JT
B007	LW2-B007	5.6	37	59	54	51	18	45	41	44	61	416 T
B008	LW2-B008	0.62 J	1.9 J	2.8	4.3	4.3	1.2 J	2.4 J	4.3	3.3	6	31.1 JT
B009	LW2-B009	2.1 J	7.9	9.9	14	9.3	4.4	9	14	9.5	12	92.1 JT
B010	LW2-B010	150	570	900	960	680	330	660	760	750	910	6670 T
B011	LW2-B011	0.29 U	0.56 J	0.24 U	0.87 J	0.5 J	0.36 U	0.45 U	0.8 J	0.26 U	0.57 J	3.3 JT
B012	LW2-B012	14	49	110	110	130	32	77	85	110	130	847 T
B015	LW2-B015	20	130	180	160	160	48	160	250	140	360	1610 T
B016	LW2-B016	980	6200	10000	10000	9600	3100	8100	12000	8600	17000	85600 T
B017	LW2-B017	2.1 J	6.4	15	15	15	3.9	11	7.4	11	15	102 JT
B018	LW2-B018	6.2	8.9	16	22	23	5.2	10	17	12	18	138 T
B019	LW2-B019	0.6 J	1.4 J	2 J	3.6	3	0.96 J	1.4 J	2.6	2.2 J	3.7	21.5 JT
B020	LW2-B020	2.1 J	13	15	21	12	7.7	13	28	10	28	150 JT
B021	LW2-B021	0.9 J	4.7	4.7	6.9	4.9	1.7 J	7.5	17	3.1	18	69.4 JT
B022-1	LW2-B022-1	180	950	1300	1500	910	510	1000	1700	940	1600	10600 T
B022-2	LW2-B022-2	27	130	170	200	130	69	150	270	130	230	1510 T
B023	LW2-B023	1.4 J	3.8	6.3	8.9	10	2.7	6	7.2	7.9	8.5	62.7 JT
B024	LW2-B024	4.5	20	22	36	23	11	24	35	18	40	234 T
B025-1	LW2-B025-1	0.83 JT	4.4 T	4.4 T	8.35 T	4.2 T	2.35 JT	3.95 T	9.1 T	3.4 T	7.75 T	48.7 JT
B025-2	LW2-B025-2	1.8 J	12	10	19	7.1	5.8	13	22	6.7	20	117 JT
B026	LW2-B026	24	130	250	240	280	72	200	430	240	570	2440 T
B050	LW2-B050	4.8	14	24	30	30	9.9	21	31	27	36	228 T
Surface Interval Sediment Samples												
C093	LW2-C093-A	180	820	1400	1600	1500	530	1300	1800	1300	2200	12600 T
D1-1	LW2-D1-1	4.3 T	17 T	35.5 T	37 T	29 T	11.5 T	23 T	25 T	29.5 T	41.5 T	253 T
D1-2	LW2-D1-2	3.4	16	26	28	26	7.5	21	24	23	33	208 T
D2	LW2-D2	11	60	100	100	98	33	75	90	87	110	764 T
G001	LW2-G001	4.9	24	37	43	37	13	32	44	33	52	320 T
G002	LW2-G002	4.8	30	43	53	39	15	55	140	35	130	545 T
G003	LW2-G003	6.1	32	50	54	50	18	43	51	43	62	409 T
G004	LW2-G004	4.4	21	32	37	30	12	33	40	27	45	281 T
G005	LW2-G005	4.1	20	31	37	29	12	30	33	26	36	258 T
G006	LW2-G006	3.1 J	17	23	28	21	9.4	29	32	19	35	217 JT
G007-1	LW2-G007-1	14.5 T	54.5 T	83 T	95.5 T	77.5 T	31.5 T	75.5 T	108 T	74 T	109 T	723 T
G007-2	LW2-G007-2	7.2	24	40	48	42	16	43	41	39	45	345 T
G008	LW2-G008	3.7	19	28	34	28	11	28	36	24	45	257 T
G009	LW2-G009	14	55	99	98	110	32	79	100	100	130	817 T
G010	LW2-G010	9	35	56	70	61	23	60	80	55	88	537 T
G011	LW2-G011	23	130	160	200	130	63	200	380	130	290	1710 T
G012	LW2-G012	6.4	32	53	58	53	19	43	61	46	71	442 T
G013	LW2-G013	7.1	37	49	67	48	22	72	94	44	110	550 T
G014	LW2-G014	2 J	10	15	19	15	5.2	14	20	13	24	137 JT
G015	LW2-G015	55	200	410	420	420	130	310	270	400	290	2910 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**											
G016	LW2-G016	3.7	19	26	34	24	9.3	36	39	22	43	256 T
G017	LW2-G017	33	140	230	260	220	84	250	300	210	290	2020 T
G018	LW2-G018	5.9	28	48	50	48	15	32	50	42	67	386 T
G019	LW2-G019	21	73	140	140	160	44	110	100	130	120	1040 T
G020	LW2-G020	19	130	130	210	97	66	240	600	99	510	2100 T
G021	LW2-G021	2.2 J	19	17	29	14	9.6	30	77	11	67	276 JT
G022	LW2-G022	4.1	22	32	36	26	12	33	34	23	42	264 T
G023-1	LW2-G023-1	6.35 T	28.5 T	58.5 T	57.5 T	59.5 T	17 T	42 T	54 T	54 T	67.5 T	445 T
G023-2	LW2-G023-2	1.1 J	5.6	12	11	9.5	3.3	6.4	8.1	8.1	11	76.1 JT
G024	LW2-G024	19	100	140	150	120	48	160	330	110	360	1540 T
G025	LW2-G025	19	100	120	160	110	56	210	580	100	460	1920 T
G026	LW2-G026	6.1	25	39	49	38	17	56	59	35	63	387 T
G027	LW2-G027	3.2	13	19	19	17	6.1	17	16	14	18	142 T
G028	LW2-G028	5.8	34	48	57	42	16	50	66	39	74	432 T
G029	LW2-G029	50	190	430	330	420	110	240	680	380	840	3670 T
G030	LW2-G030	4.9	25	36	45	36	14	40	43	29	53	326 T
G031	LW2-G031	5.9	28	39	57	36	19	89	70	36	75	455 T
G032	LW2-G032	9.1	82	75	150	55	45	210	830	49	510	2020 T
G033	LW2-G033	9.5	46	60	79	55	25	74	130	52	120	651 T
G034	LW2-G034	6.3	54	48	52	26	19	48	59	27	75	414 T
G035	LW2-G035	16	70	87	120	82	40	120	190	80	170	975 T
G036	LW2-G036	7.8	44	69	70	63	23	58	79	54	100	568 T
G037	LW2-G037	2 J	11	18	17	18	6.2	16	20	14	28	150 JT
G038	LW2-G038	5.3	25	30	52	28	16	47	83	26	73	385 T
G039	LW2-G039	6.3	39	51	67	43	21	61	59	40	70	457 T
G040	LW2-G040	5.4	25	45	47	49	15	40	33	39	40	338 T
G041	LW2-G041	81	430	740	600	680	190	510	840	620	1200	5890 T
G042	LW2-G042	4.6	27	37	41	34	15	35	40	27	47	308 T
G043	LW2-G043	8.7	44	61	79	56	26	74	130	53	120	652 T
G044-1	LW2-G044-1	14.5 T	104 T	110 T	145 T	87.5 T	49 T	165 T	135 T	88 T	130 T	1030 T
G044-2	LW2-G044-2	17	73	90	120	67	52	160	130	80	100	889 T
G045	LW2-G045	33	170	350	290	310	96	210	210	290	320	2280 T
G046	LW2-G046	7.6	35	48	67	43	22	69	86	43	83	504 T
G047	LW2-G047	43	280	450	370	310	120	340	380	310	530	3130 T
G048	LW2-G048	6.8	30	65	55	60	16	37	22	55	37	384 T
G049	LW2-G049	6.7	31	71	58	66	19	40	31	59	48	430 T
G050	LW2-G050	20	97	150	170	110	56	140	270	110	230	1350 T
G051	LW2-G051	7	33	51	60	46	20	56	56	39	66	434 T
G052	LW2-G052	23	120	230	200	210	68	150	120	190	200 J	1510 JT
G053	LW2-G053	0.56 J	2 J	1.7 J	2.3 J	1.4 J	0.77 J	2 J	2.5 J	1.3 J	3.4	17.9 JT
G054	LW2-G054	17	77	150	130	140	46	88	92	140	110	990 T
G055	LW2-G055	3.6	19	25	45	23	15	63	43	21	45	303 T
G056	LW2-G056	28	160	280	260	260	87	200	290	240	320	2130 T
G057	LW2-G057	36	260	350	410	270	140	490	530	270	510	3270 T
G058	LW2-G058	3	17	21	27	22	8.4	24	27	19	38	206 T
G059	LW2-G059	1.6 J	9	13	15	15	4.4	13	28	11	32	142 JT
G060	LW2-G060	32	170	320	280	310	87	220	390	280	500	2590 T
G061	LW2-G061	16	84	94	130	68	46	150	220	71	160	1040 T
G062	LW2-G062	13	58	85	100	86	32	85	150	82	140	831 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
G063	LW2-G063	11	55	98	90	93	31	72	92	86	110	738 T
G064	LW2-G064	67	330	640	540	580	170	390	580	540	690	4530 T
G065	LW2-G065	19	81	130	210	100	67	190	360	110	220	1490 T
G066	LW2-G066	20	87	160	160	150	48	120	150	140	180	1220 T
G067	LW2-G067	12	68	76	110	65	35	94	300	61	210	1030 T
G068	LW2-G068	22	96	110	170	100	53	130	220	110	160	1170 T
G069	LW2-G069	42	250	420	380	360	130	320	570	340	670	3480 T
G070	LW2-G070	9.3	45	69	76	70	31	66	110	63	82	621 T
G071	LW2-G071	7.3	39	65	70	69	21	56	83	61	110	581 T
G072	LW2-G072	7.2	33	54	79	54	25	64	120	49	110	595 T
G073	LW2-G073	1.2 J	7.1	7.9	9.3	6.8	3	8	11	5.9	12	72.2 JT
G074	LW2-G074	1.1 J	3.4	5.2	6.2	6	2.3 J	3.9	6.2	4.6	8	46.9 JT
G075-1	LW2-G075-1	2.7	11	16	17	16	6.4	18	20	11	24	142 T
G075-2	LW2-G075-2	3.4	18	25	27	22	8	23	27	20	34	207 T
G076	LW2-G076	9.3	46	75	79	79	26	62	74	72	91	613 T
G077	LW2-G077	9.4	34	62	67	62	22	48	60	56	68	488 T
G078	LW2-G078	1.1 J	4.5	6	6.9	6.3	2.3 J	5.9	5.8	5	9	52.8 JT
G079	LW2-G079	0.64 J	1.4 J	2.7	2.8	3.9	1.1 J	2.5 J	3.4	2.6	5.2	26.2 JT
G080	LW2-G080	4.7	34	27	49	23	14	26	66	21	68	333 T
G081	LW2-G081	6.6	36	60	66	61	19	50	67	54	76	496 T
G082	LW2-G082	4.1	14	22	25	23	7.4	18	21	20	27	182 T
G083	LW2-G083	10	45	59	77	62	24	62	82	57	94	572 T
G084	LW2-G084	9.3	38	56	73	52	23	50	62	50	75	488 T
G085	LW2-G085	410	1300	1400	1900	1200	610	1800	3400	1100	3100	16200 T
G086	LW2-G086	9.8	37	52	68	55	22	53	72	50	90	509 T
G087	LW2-G087	5.6	26	34	46	37	13	37	43	33	56	331 T
G088	LW2-G088	25	110	160	180	160	58	140	180	150	180	1340 T
G089	LW2-G089	10	130	65	94	45	32	150	790	44	810	2170 T
G090	LW2-G090	14	45	63	89	66	28	70	90	62	91	618 T
G091	LW2-G091	16	76	97	140	95	48	120	130	86	160	968 T
G092	LW2-G092	130	1100	800	1300	590	430	1500	5900	640	4300	16700 T
G093	LW2-G093	55	290	350	460	330	140	410	780	340	960	4120 T
G094	LW2-G094	150	690	650	1100	540	350	1100	1400	620	1400	8000 T
G095	LW2-G095	14	67	100	120	92	34	120	83	75	93	798 T
G096	LW2-G096	19	66	100	120	98	37	89	110	95	130	864 T
G097	LW2-G097	25	120	230	200	220	64	150	200	200	230	1640 T
G098	LW2-G098	7.9	38	61	69	58	21	48	62	52	76	493 T
G099	LW2-G099	27	85	130	170	110	53	110	130	110	150	1080 T
G100	LW2-G100	51	310	480	420	460	130	390	870	430	1100	4640 T
G101	LW2-G101	18	77	130	140	150	44	100	180	130	190	1160 T
G102	LW2-G102	54	330	600	540	530	170	380	800	470	940	4810 T
G103	LW2-G103	5	20	30	34	28	11	25	37	26	42	258 T
G104	LW2-G104	17	100	150	160	130	53	120	140	120	170	1160 T
G105	LW2-G105	62	350	510	480	520	140	430	1300	470	1600	5860 T
G106	LW2-G106	15	65	87	120	73	36	82	110	71	110	769 T
G107	LW2-G107	13	59	120	120	120	36	83	110	110	130	901 T
G108	LW2-G108	3.9	24	32	32	24	11	30	34	23	38	252 T
G109	LW2-G109	11	33	54	61	47	19	43	59	44	68	439 T
G110	LW2-G110	11	54	92	92	95	29	70	89	87	110	729 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
G111	LW2-G111	15	69	77	100	74	33	99	160	65	140	832 T
G112	LW2-G112	8.7	39	58	71	55	22	53	67	52	75	501 T
G113	LW2-G113	7.9	41	65	73	68	23	64	96	60	110	608 T
G114	LW2-G114	14	96	150	130	120	43	110	82	120	120	985 T
G115-1	LW2-G115-1	22.5 T	129 T	220 T	210 T	200 T	64 T	160 T	220 T	185 T	260 T	1670 T
G115-2	LW2-G115-2	52	310	610	500	530	160	590	230	490	290	3760 T
G116	LW2-G116	26	140	230	230	220	71	200	400	200	440	2160 T
G117	LW2-G117	28	140	210	240	180	78	220	700	170	600	2570 T
G118	LW2-G118	86	460	780	660	590	220	570	540	620	580	5110 T
G119	LW2-G119	3.4	16	28	25	22	8	20	22	23	29	196 T
G120	LW2-G120	18	110	150	150	110	54	130	200	110	210	1240 T
G121	LW2-G121	14	86	120	130	120	42	140	290	100	280	1320 T
G122	LW2-G122	28	200	240	300	200	96	270	490	190	510	2520 T
G123	LW2-G123	0.47 J	0.86 J	0.86 J	1.1 J	1.3 J	0.54 U	0.67 U	3.5	0.95 J	5.4	14.4 JT
G124	LW2-G124	43	210 J	300 J	360 J	280	120	370 J	700 J	260	580 J	3220 JT
G125	LW2-G125	3.4	21	37	35	35	13	23	36	30	49	282 T
G126	LW2-G126	4.1	14	39	35	41	10	18	11	34	33	239 T
G127	LW2-G127	140	920	1200	1100	950	380	990	1500	910	1800	9890 T
G128	LW2-G128	20	100	210	180	190	53	130	170	180	230	1460 T
G129	LW2-G129	6.7	35	65	57	60	19	47	69	53	88	500 T
G130	LW2-G130	45	190	430	350	410	110	230	350	370	410	2900 T
G131	LW2-G131	4.7	23	44	43	40	12	30	42	35	58	332 T
G132	LW2-G132	31	140	280	250	270	82	170	310	250	360	2140 T
G133	LW2-G133	25	130	200	210	180	69	170	290	170	290	1730 T
G134	LW2-G134	17	87	150	140	130	47	110	150	130	170	1130 T
G135	LW2-G135	10	58	81	100	69	36	110	160	67	160	851 T
G136	LW2-G136	22	150	190	260	170	81	230	640	170	830	2740 T
G137	LW2-G137	11	56	98	90	87	29	76	99	87	110	743 T
G138	LW2-G138	11	200	110	200	51	67	130	1500	61	1100	3430 T
G139	LW2-G139	590	2300	2000	2400	1100	880	3000	5500	1200	5200	24200 T
G140-1	LW2-G140-1	33 T	195 T	305 T	280 T	275 T	91 T	230 T	555 T	255 T	690 T	2910 T
G140-1	LW2-G140-2	12	54	100	90	85	32	70	110	78	180	811 T
G141	LW2-G141	7.3	34	61	57	55	19	43	62	55	69	462 T
G142	LW2-G142	45	160	320	300	340	99	220	330	320	390	2520 T
G143	LW2-G143	45	180	360	330	350	110	240	270	350	310	2550 T
G144	LW2-G144	29	120	220	220	190	77	180	310	190	290	1830 T
G145	LW2-G145	32	140	260	230	220	80	180	250	220	270	1880 T
G146	LW2-G146	78	590	720	610	420	220	630	940	460	1200	5870 T
G147	LW2-G147	31	110	230	210	260	65	140	170	240	220	1680 T
G148	LW2-G148	29	150	250	240	230	80	200	400	220	420	2220 T
G149	LW2-G149	12	59	92	94	75	29	68	88	73	99	689 T
G150	LW2-G150	280	2600	3100	2800	2800	900	3200	4300	2500	4800	27300 T
G152	LW2-G152	32	150	250	260	240	80	190	340	230	370	2140 T
G153	LW2-G153	85	450	830	780	810	220	540	780	760	820	6080 T
G154	LW2-G154	13	58	89	94	72	33	74	110	75	110	728 T
G155	LW2-G155	84	430	900	760	1000	210	540	1500	970	2000	8390 T
G156	LW2-G156	42	200	360	350	370	110	290	500	340	540	3100 T
G157	LW2-G157	17	90	100	93	100	28	160	460	84	550	1680 T
G158	LW2-G158	49	230	410	420	370	130	370	810	360	840	3990 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	High Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
G159	LW2-G159	9.2	47	72	71	59	25	57	64	62	77	543 T
G160	LW2-G160	100	340	560	590	620	180	420	1000	620	1300	5730 T
G161	LW2-G161	71	310	470	460	510	130	390	1200	490	1500	5530 T
G162	LW2-G162	39	210	360	340	340	110	290	440	310	500	2940 T
G163	LW2-G163	5.4	38	46	48	32	16	39	49	31	66	370 T
G164	LW2-G164	15	50	77	110	58	34	63	69	58	75	609 T
G165	LW2-G165	16	77	100	120	76	41	94	130	81	120	855 T
G166	LW2-G166	10	69	110	100	120	32	92	170	100	320	1120 T
G168	LW2-G168	57	300	390	480	250	160	420	480	280	410	3230 T
G169	LW2-G169	14	86	130	140	110	46	110	130	100	180	1050 T
G170	LW2-G170	16	100	130	160	110	52	150	400	110	340	1570 T
G171	LW2-G171	29	150	320	290	280	96	260	190	260	220	2100 T
G172	LW2-G172	21	150	190	210	180	72	200	410	150	390	1970 T
G173	LW2-G173	6.3	34	62	55	55	19	46	61	50	80	468 T
G174	LW2-G174	12	55	91	87	83	29	75	120	77	160	789 T
G175	LW2-G175	11	45	63	70	51	23	56	83	51	69	522 T
G176	LW2-G176	16	90	94	130	75	44	130	330	78	350	1340 T
G177	LW2-G177	13	59	120	110	100	36	83	110	96	140	867 T
G178	LW2-G178	3900	32000	41000	38000	26000	12000	35000	83000	27000	97000	395000 T
G179	LW2-G179	660	5800	8100	6800	6800	2000	7000	21000	6200	27000	91400 T
G180	LW2-G180	250	1900	2800	2400	2300	760	2300	3900	2100	6100	24800 T
G181	LW2-G181	98	690	1000	860	770	300	800	1800	800	2000	9120 T
G182	LW2-G182	39	150	180	140	180	39	230	450	100	690	2200 T
G183	LW2-G183	7.6	37	78	62	74	20	52	41	65	82	519 T
G184	LW2-G184	11	59	89	85	80	27	75	100	70	130	726 T
G185	LW2-G185	39	270	400	390	380	120	340	730	350	890	3910 T
G186	LW2-G186	200	990	1900	1600	1600	530	1300	1100	1600	1500	12300 T
G187	LW2-G187	1.4 J	4	8	9.4	9	2.9	4.1	7.1	7.1	11	64 JT
G188	LW2-G188	33	160	200	250	140	80	180	230	150	210	1630 T
G189	LW2-G189	53	310	520	480	440	150	370	870	420	910	4520 T
G190	LW2-G190	170	730	970	940	840	340	920	1000	910	930	7750 T
G191	LW2-G191	31	240	280	210	190	68	300	770	160	650	2900 T
G192	LW2-G192	48	260	310	380	230	130	300	500	250	430	2840 T
G193	LW2-G193	87	490	470	610	250	220	610	1300	320	810	5170 T
G194	LW2-G194	310	2600	3700	3200	2900	940	3200	6300	2700	8600	34500 T
G195	LW2-G195	58	300	580	500	520	160	350	880	490	1000	4840 T
G196	LW2-G196	130	1100	920	1100	480	430	1300	2200	520	2000	10200 T
G197-1	LW2-G197-1	86	510	640	730	480	240	590	1200	500	1100	6080 T
G197-2	LW2-G197-2	110	570	790	880	800	260	740	870	740	950	6710 T
G198	LW2-G198	130	510	650	780	510	260	580	960	580	960	5920 T
G199	LW2-G199	88	370	430	540	340	170	420	760	380	720	4220 T
G200	LW2-G200	29	130	230	220	220	72	180	310	210	360	1960 T
G202	LW2-G202	32	160	180	220	140	76	200	390	150	300	1850 T
G203-1	LW2-G203-1	45.5 T	255 T	280 T	375 T	205 T	125 T	290 T	635 T	215 T	570 T	3000 T
G203-2	LW2-G203-2	69	330	390	480	300	160	380	920	310	710	4050 T
G204	LW2-G204	160	940	1400	1300	1200	460	1200	1200	1100	1300	10300 T
G205	LW2-G205	13	88 J	140 J	130 J	130 J	39	110 J	200 J	100 J	260 J	1210 JT
G206	LW2-G206	75	340	420	500	370	160	450	680	390	740	4130 T
G207	LW2-G207	110	490	690	760	550	240	530	1200	590	1100	6260 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
G208	LW2-G208	50	220	360	340	380	110	270	810	360	810	3710 T
G209	LW2-G209	150	840	990	940	660	410	900	1600	730	1400	8620 T
G210	LW2-G210	1500	17000	23000	20000	19000	6000	19000	60000	17000	77000	260000 T
G212-1	LW2-G212-1	4.8	27	36	37	31	13	34	53	28	64	328 T
G212-2	LW2-G212-2	6.6	46	59	58	53	19	57	130	47	150	626 T
G213	LW2-G213	140	980	1800	1600	1900	460	1300	4700	1600	4400	18900 T
G214-1	LW2-G214-1	50	270	380	430	320	140	330	710	330	650	3610 T
G215	LW2-G215	200	1100	1600	1600	1400	560	1400	1900	1300	2200	13300 T
G216	LW2-G216	75	500	860	720	670	220	680	990	630	1500	6850 T
G217	LW2-G217	16	120	100	160	130	51	160	350 J	120	510 J	1720 JT
G218	LW2-G218	78	380	520	580	390	190	410	860	420	700	4530 T
G219	LW2-G219	4900	60000	69000	62000	46000	18000	69000	190000	45000	170000	734000 T
G220	LW2-G220	110	800	980	880	820	290	920	2600	910	3400	11700 T
G221	LW2-G221	760	8100	10000	9100	7100	2900	9700	34000	6700	36000	124000 T
G222	LW2-G222	51	270	470	430	400	130	330	650	390	720	3840 T
G223	LW2-G223	4400	41000	46000	42000	41000	16000	48000	140000	40000	140000	558000 T
G224	LW2-G224	18	110	160	150	130	52	150	240	120	240	1370 T
G225	LW2-G225	25000	320000	340000	300000	180000	100000	370000	1200000	210000	1300000	4350000 T
G226	LW2-G226	40	440	230	570	180	180	910	1200	200	910	4860 T
G227	LW2-G227	9.5	28	50	58	51	19	30	56	50	66	418 T
G228	LW2-G228	96	460	680	830	590	250	800	1900	580	1500	7690 T
G229	LW2-G229	58	290	500	480	440	150	350	610	420	630	3930 T
G230	LW2-G230	86	640	640	980	420	290	780	1000	440	940	6220 T
G231	LW2-G231	45	210	320	360	270	110	260	390	270	380	2620 T
G232	LW2-G232	160	560	810	950	810	330	680	980	870	1000	7150 T
G233	LW2-G233	140	920	1500	1300	1200	420	1100	1300	1100	1600	10600 T
G234	LW2-G234	8.1	40	56	69	46	23	59	160	44	130	635 T
G235	LW2-G235	260 J	1900	2900	2400	2100	780 J	2100	3500	2000	4600	22500 JT
G236	LW2-G236	95	400	670	740	620	230	520	790	600	970	5640 T
G237	LW2-G237	97	540	870	860	720	260	690	920	700	890	6550 T
G238	LW2-G238	26	180	190	210	170	70	210	620	150	630	2460 T
G239	LW2-G239	32	170	230	250	200	82	200	270	200	300	1930 T
G240	LW2-G240	97	490	850	830	740	260	630	1000	720	1100	6720 T
G241	LW2-G241	47	220	370	340	310	120	280	370	320	380	2760 T
G242	LW2-G242	100	550	860	850	720	270	670	1100	720	1100	6940 T
G243	LW2-G243	4.6	26	41	40	36	13	38	47	33	59	338 T
G244	LW2-G244	44	200	320	340	290	110	260	460	290	460	2770 T
G245	LW2-G245	130	540	840	820	760	250	630	1000	750	1100	6820 T
G246	LW2-G246	51	240	460	390	420	130	290	430	390	530	3330 T
G247	LW2-G247	69	270	370	410	340	130	310	670	350	570	3490 T
G248	LW2-G248	7.4	43	80	71	73	22	67	75	65	97	600 T
G249	LW2-G249	39	170	330	280	290	80	240	230	250	360	2270 T
G250-1	LW2-G250	42	200	330	340	360	100	260	500	330	600	3060 T
G251-1	LW2-G251-1	220	1300	2200	1900	1900	600	1600	3100	1800	3600	18200 T
G251-1	LW2-G251-2	150	1100	1500	1400	1300	450	1200	4400	1200	5600	18300 T
G252	LW2-G252	42	240	420	330	330	100	290	370	310	530	2960 T
G253	LW2-G253	900	8000	9900	8000	6400	2800	9800	18000	6900	22000	92700 T
G254	LW2-G254	290	640	1100	1200	970	430	910	1200	1200	1200	9140 T
G255	LW2-G255	50	420	340	260	190	81	480	610	150	820	3400 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	High Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**											
G256	LW2-G256	24	150	220	190	190	58	170	750	180	860	2790 T
G257	LW2-G257	78	190	460	370	300	110	300	160	320	270	2560 T
G258	LW2-G258	120	980	1200	1000	900	320	1300	3500	830	3300	13500 T
G259	LW2-G259	2400	14000	21000	18000	16000	5900	17000	28000	17000	31000	170000 T
G260	LW2-G260	38	170	270	250	230	79	240	290	200	380	2150 T
G261	LW2-G261	3.2	25	32	29	24	9.7	33	70	22	89	337 T
G262	LW2-G262	2.3 J	14	15	18	9.7	6	17	31	10	27	150 JT
G263	LW2-G263	530	3100	4700	4100	4000	1300	3700	6500	3800	7300	39000 T
G264	LW2-G264	14000	120000	140000	120000	93000	37000	130000	240000	88000	330000	1310000 T
G265	LW2-G265	230	1400	1700	1400	1300	510	1600	3600	1200	5400	18300 T
G266	LW2-G266	15	73	140	130	130	45	98	68	120	110	929 T
G267	LW2-G267	6.4	28	37	50	31	16	36	52	29	53	338 T
G268	LW2-G268	16	64	84	120	73	36	120	170	71	160	914 T
G269	LW2-G269	2000	13000	17000	16000	15000	4800	16000	32000	13000	41000	170000 T
G270-1	LW2-G270-1	2100	12000	17000	15000	14000	4700	14000	33000	14000	39000	165000 T
G270-2	LW2-G270-2	3200	22000	32000	28000	26000	9200	26000	55000	24000	67000	292000 T
G271	LW2-G271	1.3 J	7	9.9	10	9	3	8.1	11	7	14	80.3 JT
G272	LW2-G272	22	110	200	170	180	55	140	210	170	300	1560 T
G273	LW2-G273	1300	9000	12000	12000	10000	3800	11000	26000	9800	28000	123000 T
G274	LW2-G274	2200	12000	17000	16000	15000	5900	16000	32000	13000	38000	167000 T
G275-1	LW2-G275-1	9.6	130	74	110	42	34	150	780	40	530	1900 T
G275-2	LW2-G275-2	9.8	130	77	110	55	36	150	980	49	610	2210 T
G276	LW2-G276	400	2400	4100	3600	3700	1200	3200	6600	3300	7600	36100 T
G277	LW2-G277	8.9	43	46	64	38	21	52	89	37	76	475 T
G278	LW2-G278	2500	18000	27000	24000	23000	7600	21000	55000	21000	68000	267000 T
G280	LW2-G280	11	65	71	96	57	32	89	190	51	170	832 T
G281	LW2-G281	8.4	46	85	67	73	22	56	34	70	56	517 T
G282	LW2-G282	71	300	220	380	220	120	300	640	300	770	3320 T
G283	LW2-G283	12000	110000	140000	130000	100000	42000	120000	340000	100000	420000	1510000 T
G284	LW2-G284	350	2200	3700	3100	3400	950	2600	5500	3200	6900	31900 T
G285	LW2-G285	1.3 J	5.8	11	9.3	9.4	3.3	7	11	8.5	13	79.6 JT
G287	LW2-G287	2.7	12	18	18	15	6.3	16	48	14	47	197 T
G288	LW2-G288	8500	88000	100000	91000	80000	32000	110000	360000	80000	430000	1380000 T
G289	LW2-G289	1700	11000	17000	15000	15000	4700	13000	36000	14000	46000	173000 T
G290	LW2-G290	2.9	41	21	33	14	12	56	210	13	150	553 T
G291	LW2-G291	7.2	52	48	68	36	23	66	130	36	120	586 T
G292	LW2-G292	2600	21000	31000	27000	26000	8100	26000	69000	24000	79000	314000 T
G293	LW2-G293	12	78	82	110	57	34	110	210	57	190	940 T
G294-1	LW2-G294-1	5400	40000	42000	40000	44000	17000	51000	150000	44000	210000	643000 T
G294-2	LW2-G294-2	5150 T	41500 T	51500 T	48500 T	45500 T	15500 T	47000 T	128000 T	44500 T	175000 T	602000 T
G295	LW2-G295	4.7	23	28	35	21	12	32	43	19	46	264 T
G296	LW2-G296	5.6	23	31	45	27	14	36	55	25	51	313 T
G297	LW2-G297	370	3400	4600	3900	3700	1200	4200	17000	3500	18000	59900 T
G298	LW2-G298	17000	200000	220000	190000	140000	65000	230000	700000	140000	910000	2810000 T
G299	LW2-G299	330	1200	1900	1600	1700	600	1400	1900	1500	2100	14200 T
G300	LW2-G300	0.67 J	3.9	4.8	5.2	3.4	1.7 J	5	8.4	2.9	9.8	45.8 JT
G301	LW2-G301	4000	52000	47000	40000	29000	13000	62000	140000	28000	190000	605000 T
G302	LW2-G302	1500	9300	17000	15000	15000	4800	11000	21000	13000	27000	135000 T
G303	LW2-G303	5.8	33	32	49	26	16	48	85	24	77	396 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
G305	LW2-G305	180	1000	1300	1100	1100	380	1100	2800	1100	2700	12800 T
G306	LW2-G306	2.1 J	19	15	26	13	8.2	28	64	11	64	250 JT
G307	LW2-G307	4.4	26	29	37	22	12	31	61	21	64	307 T
G308	LW2-G308	100	1400	780	930	590	370	1800	6400	600	5800	18800 T
G309	LW2-G309	53	400	550	540	460	170	500	900	430	1100	5100 T
G310	LW2-G310	4.2	29	30	39	27	14	39	65	23	83	353 T
G311-1	LW2-G311-1	425 T	3850 T	4800 T	4300 T	3500 T	1400 T	4900 T	13000 T	3150 T	15500 T	54800 T
G311-2	LW2-G311-2	200	1000	1400	1400	1200	460	1300	1600	1000	2000 J	11600 JT
G313	LW2-G313	3.7	23	25	32	22	12	28	65	19	70	300 T
G314	LW2-G314	38	200	320	320	300	100	310	340	260	430	2620 T
G315	LW2-G315	110	460	760	770	660	240	580	930	650	1000	6160 T
G316	LW2-G316	49	120	410	340	450	100	170	130	410	220	2400 T
G317	LW2-G317	1.8 J	10	14	16	15	5.4	21	19	12	25	139 JT
G318	LW2-G318	230	810	1400	1500	1200	470	940	2100	990	2100	11700 T
G319	LW2-G319	0.5 J	4.7	3.3	4.9	2.4 J	1.7 J	6.7	15	2.2 J	11	52.4 JT
G320	LW2-G320	280	1500	1700	1800	1300	570	1900	5800	1200	5900	22000 T
G321	LW2-G321	31	210	250	260	220	85	250	930	200	820	3260 T
G322	LW2-G322	82	1500	620	720	230	300	1700	7400	310	6500	19400 T
G323	LW2-G323	280 J	900 J	2000	2000	1900	620 J	1300	1200	1800	1600	13600 JT
G324-1	LW2-G324-1	91	370	690	700	600	230	510	720	590	670	5170 T
G324-2	LW2-G324-2	500 J	1800	2500	2900	1600	980 J	2100	2700	1600	2900	19600 JT
G325	LW2-G325	31	410	280	400	180	140	440	730	180	690	3480 T
G326	LW2-G326	7.1	66	59	68	51	24	78	260	45	270	928 T
G327	LW2-G327	36	140	230	230	200	75	180	480	190	420	2180 T
G328	LW2-G328	0.5 J	3.7	3.7	4.5	3.5	1.4 J	5.1	11	2.8	13	49.2 JT
G329	LW2-G329	8.5	40	54	64	55	21	59	100	50	150	602 T
G330	LW2-G330	31	410	280	230	170	240	510	1900	200	1400	5370 T
G331	LW2-G331	250	960	1400	2100	1300	610	1700	3600	1200	3800	16900 T
G332	LW2-G332	20	130	160	180	160	59	170	310	130	390	1710 T
G333	LW2-G333	220	930	1200	1400	900	450	1100	1700	880	1600	10400 T
G334	LW2-G334	280	1500	1600	2000	940	660	1700	3500	960	3000	16100 T
G335	LW2-G335	37	340	280	350	190	90	620	860	170	1200	4140 T
G336	LW2-G336	8.7	36	56	62	54	22	54	68	50	92	503 T
G337	LW2-G337	2.6	16	20	24	18	8	23	31	15	37	195 T
G338	LW2-G338	5.3	29	48	48	46	16	41	47	41	64	385 T
G339	LW2-G339	11	39	48	65	59	21	60	82	55	74	514 T
G340	LW2-G340	3.9	20	24	37	19	12	30	39	18	41	244 T
G341	LW2-G341	5	28	40	46	38	15	39	48	32	60	351 T
G342	LW2-G342	6.5	42	39	78	31	23	91	260	29	190	790 T
G343	LW2-G343	1.5 J	12	12	17	9.3	6	15	26	8.8	28	136 JT
G344	LW2-G344	4.6	25	40	42	41	14	41	42	36	55	341 T
G345-1	LW2-G345-1	11 T	65.5 T	78 T	104 T	63.5 T	36 T	107 T	124 T	63 T	118 T	770 T
G345-2	LW2-G345-2	14	86	100	140	86	47	160	160	86	160	1040 T
G346	LW2-G346	28	180	180	340	110	110	400	520	120	400	2390 T
G347	LW2-G347	22	120	120	220	98	71	240	380	100	310	1680 T
G348	LW2-G348	11	57	69	130	59	40	130	380	57	260	1190 T
G349	LW2-G349	9.1	54	57	70	41	25	65	110	39	120	590 T
G350	LW2-G350	87	820	700	1100	330	380	1800	3000	410	2300	10900 T
G351	LW2-G351	27	270	210	320	110	120	380	530	120	370	2460 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
G351-2	LW2-G351-2	87.5 T	1080 T	645 T	1090 T	235 T	390 T	1200 T	2100 T	310 T	1450 T	8590 T
G352	LW2-G352	2.5 J	13	15	20	12	7.2	19	26	11	27	153 JT
G353-1	LW2-G353-1	34	140	150	290	130	100	380	260	140	200	1820 T
G353-2	LW2-G353-2	19	77	94	180	80	56	160	250	91	190	1200 T
G354	LW2-G354	2.4 J	16	15	22	14	7.5	21	31	11	34	174 JT
G355	LW2-G355	3900	16000	12000	33000	9200	10000	19000	17000	9900	13000	143000 T
G356	LW2-G356	11	68	68	110	61	38	120	100	57	100	733 T
G357	LW2-G357	0.97 J	5.7	7.2	9	7.2	3.1	7.5	12	6.2	15	73.9 JT
G358	LW2-G358	4	21	28	36	29	13	36	45	24	55	291 T
G359	LW2-G359	4.9	21	26	38	26	12	36	48	24	48	284 T
G360	LW2-G360	15	62	95	130	75	42	96	130	74	130	849 T
G361	LW2-G361	2.3 J	13	15	22	16	7	21	32	13	36	177 JT
G362-1	LW2-G362-1	6.85 T	41 T	48 T	68.5 T	44.5 T	20.5 T	62.5 T	92.5 T	39 T	87 T	510 T
G362-2	LW2-G362-2	2.4 J	12	17	21	14	7	22	25	12	28	160 JT
G363	LW2-G363	7.3	47	44	64	36	22	33	68	36	71	428 T
G364	LW2-G364	11	58	83	86	77	23	84	150	61	180	813 T
G365	LW2-G365	4.6	29	35	44	29	15	33	49	25	61	325 T
G366	LW2-G366	6	26	36	49	29	17	83	55	25	56	382 T
G367	LW2-G367	36	280	210	590	150	160	470	1500	160	1100	4660 T
G368	LW2-G368	4.5	32	32	42	29	14	46	84	24	74	382 T
G369	LW2-G369	2.2 J	16	17	25	15	8.4	26	31	12	39	192 JT
G370	LW2-G370	8.2	35	43	61	41	22	49	64	37	68	428 T
G371	LW2-G371	6.3	42	46	63	38	20	58	80	33	94	480 T
G372-1	LW2-G372-1	5.85 T	27.5 T	35 T	53 T	31.5 T	17 T	44 T	62 T	28.5 T	64.5 T	369 T
G372-2	LW2-G372-2	7.4	30	38	56	34	18	49	51	35	50	368 T
G373	LW2-G373	0.9 J	8.4	8.4	8.2	8.3	8.2	11	18	7.7	18	97.1 JT
G374	LW2-G374	2 J	23	19	33	12	13	33	34 J	12	37 J	218 JT
G375	LW2-G375	2.4 J	11	14	20	12	6.7	15	25	13	23	142 JT
G376	LW2-G376	15	71	83	110	64	37	90	150	67	140	827 T
G377	LW2-G377	1.8 J	7.8	14	12	12	3.2	11	18	11	29	120 JT
G378	LW2-G378	3.3	16	18	23	15	7.3	20	34	15	31	183 T
G379	LW2-G379	19	110	110	190	110	61	180	230	100	220	1330 T
G380	LW2-G380	48	790	400	620	230	190	840	2400	240	1700	7460 T
G381	LW2-G381	3.5	20	25	30	20	10	23	41	19	46	238 T
G382	LW2-G382	33	120	170	260	160	81	220	340	150	290	1820 T
G383	LW2-G383	12	35	37	62	46	17	36	94	31	91	461 T
G384-1	LW2-G384-1	5.8 T	28 T	32.5 T	45.5 T	26.5 T	14.5 T	36.5 T	61 T	25 T	56 T	331 T
G384-2	LW2-G384-2	9.5	50	51	72	39	24	61	110	39	99	555 T
G385	LW2-G385	9.9	48	57	91	58	29	81	110	47	110	641 T
G386	LW2-G386	5.1	22	26	33	20	11	26	38	20	36	237 T
G387	LW2-G387	2.1 J	7.4	9.4	13	9.3	3.9	11	14	7.7	15	92.8 JT
G388	LW2-G388	3.7	22	25	34	20	11	38	39	19	75	287 T
G389	LW2-G389	0.39 U	0.5 J	0.33 U	0.72 U	0.56 J	0.5 U	0.62 U	1.1 J	0.36 U	0.54 U	2.16 JT
G390	LW2-G390	240	1100	1100	1400	920	590	1300	2700	1100	2200	12700 T
G391	LW2-G391	3.1	18	18	24	13	8.4	27	33	14	29	188 T
G392	LW2-G392	62	320	340	440	240	150	330	1000	270	690	3840 T
G393	LW2-G393	220	1400	1300	1900	940	640	1500	3700	1100	2500	15200 T
G394	LW2-G394	22	150	130	160	110	39	260	460	110	360	1800 T
G395	LW2-G395	7.1	38	32	53	21	19	50	66	26	54	366 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
G396	LW2-G396	0.41 U	1.3 J	2.2 J	2.9	1.3 J	1.2 J	4	11	1.4 J	8.7	34 JT
G397	LW2-G397	26	110	130	240	140	76	200	280	130	280	1610 T
G398	LW2-G398	4.7	23	24	38	27	12	35	71	23	67	325 T
G399	LW2-G399	22	160	170	180	83	64	220	500	100	400	1900 T
G400	LW2-G400	1.6 J	6.5	8.2	8.9	7.1	2.9	8.6	12	6.1	12	73.9 JT
G401	LW2-G401	53	260	290	390	260	130	350	780	270	780	3560 T
G402	LW2-G402	38	170	180	310	180	97	240	460	190	380	2250 T
G403	LW2-G403	1.6 J	11	14	15	9.6	4.6	13	27 J	8.8	38 J	143 JT
G404	LW2-G404	16	78	93	140	67	47	120	210	75	170	1020 T
G405	LW2-G405	8.3	33	38	55	39	17	55	70	36	82	433 T
G406	LW2-G406	3.5	12	18	21	15	7	20	25	15	24	161 T
G407	LW2-G407	2.9	20	21	32	17	11	39	68	15	62	288 T
G408	LW2-G408	18	84	86	140	83	49	140	230	79	200	1110 T
G409	LW2-G409	3.3	12	17	22	17	6.7	18	27	13	31	167 T
G410-1	LW2-G410-1	2.1 J	8.7	10	16	11	4.3	12	22	8	24	118 JT
G410-2	LW2-G410-2	3 J	14	19	25	17	8	22	38	14	35	195 JT
G411	LW2-G411	4.2	15	22	39	24	11	24	40	23	40	242 T
G412	LW2-G412	2 J	8.9	11	13	8.3	4.5	11	15	8.4	14	96.1 JT
G413	LW2-G413	1.3 J	7.4	9.2	13	7.3	4.3	11	22	5.5	23	104 JT
G414	LW2-G414	2.7	14	15	20	12	6.6	17	24	12	22	145 T
G415	LW2-G415	150	760	780	1300	590	470	1400	2400	700	2100	10700 T
G416	LW2-G416	23	320	190	460	100	150	700	1300	120	1400	4760 T
G417	LW2-G417	2.3 J	11	12	19	15	5.6	15	26	9.7	32	148 JT
G418	LW2-G418	2.2 J	11	13	20	13	6.6	18	27	12	27	150 JT
G419	LW2-G419	3.5	14	18	24	15	8	21	32	15	28	179 T
G420	LW2-G420	3.4	16	19	37	21	10	30	150	18	93	397 T
G421	LW2-G421	88	360	390	860	430	250	690	1100	450	1100	5720 T
G422	LW2-G422	7.4	37	45	53	32	18	44	75	34	74	419 T
G423	LW2-G423	2.6 J	13	16	20	13	6.4	17	25	12	23	148 JT
G424	LW2-G424	3.1	15	18	22	15	6.5	21	28	14	31	174 T
G425	LW2-G425	2.9	13	15	23	16	7.4	18	52	12	52	211 T
G426	LW2-G426	120	920	750	1700	530	500	1900	4900	570	3400	15300 T
G427	LW2-G427	4.8	18	26	33	22	11	28	38	22	37	240 T
G428	LW2-G428	3.2	12	18	20	14	7.2	14	18	15	16	137 T
G429	LW2-G429	1.6 J	6.5	8.4	12	8.9	4.2	8.4	14	7.5	15	86.5 JT
G430	LW2-G430	16	85	95	110	67	40	100	200	71	200	984 T
G431	LW2-G431	80	320	450	550	300	190	370	550	350	440	3600 T
G432	LW2-G432	44	230	270	310	180	110	280	510	200	420	2550 T
G433-1	LW2-G433-1	10	40	53	73	44	23	51	63	43	63	463 T
G433-2	LW2-G433-2	14	48	62	96	59	30	61	83	59	72	584 T
G434	LW2-G434	100	820	830	860	340	310	910	1300	430	1300	7200 T
G435	LW2-G435	0.8 J	4.2	4.9	6.5	4.1	1.9 J	4.3	7.3	3.8	8.1	45.9 JT
G436	LW2-G436	0.67 J	5.4	4.3	7.4	3.1	2.6	8.8	24	3.2	18	77.5 JT
G437	LW2-G437	8.5	46	55	71	43	25	64	100	40	100	553 T
G438	LW2-G438	5	33	46	42	40	14	40	110	35	140	505 T
G439	LW2-G439	19	94	100	190	88	59	170	280	91	230	1320 T
G440	LW2-G440	1.7 J	12	13	18	11	5.4	17	23	9.4	25	136 JT
G441	LW2-G441	5	51	35	63	24	20	69	200	23	150	640 T
G442	LW2-G442	4.3	20	30	38	30	12	28	36	26	43	267 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
G443	LW2-G443	1.2 J	7.7	8.3	12	7.4	3.9	11	15	6.7	18	91.2 JT
G444	LW2-G444	6.4	28	34	51	35	17	55	64	31	62	383 T
G445	LW2-G445	65	280	280	410	220	140	340	850	240	980	3810 T
G446	LW2-G446	2.7	15	16	19	14	7.7	17	23	13	26	153 T
G447	LW2-G447	3.3	15	21	30	19	9.9	27	33	15	36	209 T
G448	LW2-G448	1.7 J	19	13	23	9.7	7.3	29	51	8.6	43	205 JT
G449	LW2-G449	1.9 J	12	13	20	14	6.4	14	27	10	32	150 JT
G450-1	LW2-G450-1	6.8	37	32	53	40	17	63	95	32	86	462 T
G450-2	LW2-G450-2	5	29	24	40	31	13	50	75	24	70	361 T
G451	LW2-G451	4.8	22	35	39	30	12	28	30	24	35	260 T
G452	LW2-G452	1.7 J	12	12	18	11	5.9	18	23	9.7	29	140 JT
G453	LW2-G453	27	170	150	200	140	51	200	530	120	680	2270 T
G454	LW2-G454	1.4 J	3.8	4.2	5.4	4.9	1.7	3.6	7.3	3.7	8.9	44.9 JT
G455	LW2-G455	12	53	53	85	57	26	54	150	50	150	690 T
G456	LW2-G456	71	390	410	520	270	170	410	1100	320	820	4480 T
G457	LW2-G457	33	210	190	300	130	110	320	510	140	390	2330 T
G458	LW2-G458	4.7	25	32	41	30	13	31	68	26	70	341 T
G459	LW2-G459	3.2	18	20	28	17	8.5	24	40	15	39	213 T
G460	LW2-G460	1.7 J	9.8	12	16	11	5.1	16	19	8.7	23	122 JT
G461	LW2-G461	3	16	15	29	14	8.9	30	41	13	39	209 T
G462	LW2-G462	2 J	13	13	21	14	6.7	23	31	11	34	169 JT
G463	LW2-G463	2 J	20	14	27	9.2	8	33	100	9.2	78	300 JT
G464	LW2-G464	2 J	15	14	21	13	7.2	22	30	10	33	167 JT
G465	LW2-G465	0.73 J	3.5	4.6	5.9	4.4	1.7 J	3.4	7.3	4.1	6.7	42.3 JT
G466	LW2-G466	1.2 J	7.7	8.3	9.2	5.7	2.9	9.9	14	4.6	17	80.5 JT
G467	LW2-G467	110	1600	790 J	1000	320 J	400 J	1500	6100	390 J	4800	17000 JT
G468	LW2-G468	9.9	52	49	99	42	31	110	130	42	110	675 T
G469	LW2-G469	1.3 J	7.2	6.4	11	6.1	2.9 J	11	16	5.3	14	81.2 JT
G470	LW2-G470	2.5 J	11	15	19	12	5.8	16	20	12	22	135 JT
G471	LW2-G471	0.84 J	5.4	5.8	9.3	5.4	2.2 J	6.7	17	3.7	15	71.3 JT
G472	LW2-G472	5.4	53	38	53	21	18	65	75	19	79	426 T
G473	LW2-G473	53	180	240	320	270	100	330	450	180	410	2530 T
G474	LW2-G474	2.3 J	11	12	18	12	5.4	18	24	9.8	24	137 JT
G475-1	LW2-G475-1	24	110	120	200	100	68	150	240	120	170	1300 T
G475-2	LW2-G475-2	1.2 J	17	8.6	17	5.9	5.5	26	69	5.8	50	206 JT
G476	LW2-G476	1.9 J	8	13	16	10	4.6	12	18	9.7	18	111 JT
G477	LW2-G477	45	190	210	580	180	140	480	930	180	750	3690 T
G478	LW2-G478	0.68 J	4.4	5.3	7.3	5	2.2 J	5.8	9	4.1	10	53.8 JT
G479	LW2-G479	1.5 J	12	10	14	8	4.3	14	32	7.3	30	133 JT
G480	LW2-G480	11	67	69	86	70	28	85	290	61	240	1010 T
G481	LW2-G481	1.1 J	3.7	5.2	6.4	5.1	2.1 J	4.8	7.2	4.4	8	48 JT
G482	LW2-G482	0.62 U	3.4	4.2	4.8	3.5	1.7 J	3	8.3	3.1	8.2	40.2 JT
G483	LW2-G483	0.79 J	4.7	5.8	6.8	4.5	2.1 J	5.9	10	3.3	9.7	53.6 JT
G484	LW2-G484	2.4 J	16	18	24	14	8	22	28	11	31	174 JT
G485	LW2-G485	2.7	18	17	25	13	8.1	27	74	12	60	257 T
G486	LW2-G486	1.4 J	12	14	16	8.5	5.6	13	18	8.4	19	116 JT
G487	LW2-G487	5.5	30	32	42	28	13	52	65	21	81	370 T
G488	LW2-G488	1.9 J	10	12	14	10	4.4	15	25	9.1	26	127 JT
G489	LW2-G489	1.5 J	10	11	16	11	4.3	12	20	8.2	22	116 JT

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
G490	LW2-G490	2.3 J	11	13	20	16	5.8	11	25	11	26	141 JT
G491	LW2-G491	10	72	69	100	47	35	92	260	51	180	916 T
G492-1	LW2-G492-1	6.15 T	25 T	38.5 T	47 T	39.5 T	15.5 T	43 T	70.5 T	36 T	72 T	393 T
G492-2	LW2-G492-2	6.8	32	43	55	44	18	57	110	40	110	516 T
G493	LW2-G493	2.5 J	10	11	16	13	4.1	17	23	8.7	24	129 JT
G494	LW2-G494	19	100	140	190	150	51	170	370	140	380	1710 T
G495	LW2-G495	25	130	160	220	110	70	200	380	130	280	1710 T
G496	LW2-G496	2.9	21	24	25	14	8.2	24	25	12	30	186 T
G497	LW2-G497	85	260	360	510	460	160	360	800	420	570	3990 T
G498	LW2-G498	41	180	240	310	190	99	210	350	200	290	2110 T
G499	LW2-G499	5.1	25	32	41	25	13	62	40	25	45	313 T
G500	LW2-G500	85	450	610	650	450	200	680	1000	480	1200	5810 T
G501	LW2-G501	2.5 J	13	15	23	16	7.5	18	41	12	40	188 JT
G502	LW2-G502	2.4 J	3.9	7.2	8.3	15	3	9.7	6.4	10	6.7	72.6 JT
G503	LW2-G503	6.8 J	61 J	49 J	78 J	34 J	27 J	81 J	150 J	37 J	140 J	664 JT
G504	LW2-G504	4.5 J	26 J	29 J	38 J	20 J	12 J	32 J	42 J	18 J	44 J	266 JT
G505	LW2-G505	18	44	50	74	90	20	40	92	70	69	567 T
G506	LW2-G506	8.6	49	66	74	64	21	65	130	56	140	674 T
G507	LW2-G507	2.5 J	11	14	17	13	5.7	15	22	12	22	134 JT
G508	LW2-G508	230	620	810	910	580	370	810	400	820	350	5900 T
G509	LW2-G509	3.8 J	22	24	38	22	12	31	42	20	39	254 JT
G510	LW2-G510	3.4	16	17	27	24	8	27	39	18	41	220 T
G511	LW2-G511	1.8 J	11	12	18	11	5.5	12	24	8.8	23	127 JT
G512	LW2-G512	1.8 J	9.3	11	14	9.7	3	9.3	22	8.7	20	109 JT
G513	LW2-G513	6.9	24	39	54	34	18	26	33	33	36	304 T
G514	LW2-G514	2.2 J	11 J	14 J	18 J	14 J	6.5 J	13 J	22 J	12 J	23 J	136 JT
G515	LW2-G515	3.6	15	21	26	19	7.1	20	34	15	40	201 T
G516	LW2-G516	22	220	120	340	66	94	340	500	64	350	2120 T
G517	LW2-G517	6.2	35	37	59	32	19	65	100	31	88	472 T
G518	LW2-G518	20	130	110	150	90	42	120	710	93	460	1930 T
G519-1	LW2-G519-1	18	74	120	120	91	40	91	110	97	110	871 T
G519-1	LW2-G519-2	36	210	210	310	170	100	240	430	170	390	2270 T
G520	LW2-G520	37	180	310	300	300	100	230	340	270	380	2450 T
G521	LW2-G521	410	2800	4600	3900	4200	1200	3200	7600	3700	9800	41400 T
U1C-1	LW2-U1C-1	0.58 J	2.2 U	1.8 U	3.1 U	2.2 U	0.52 U	1.9 U	6.7	1.3 U	6.4	13.7 JT
U1C-2	LW2-U1C-2	0.41 U	1.7 J	0.35 U	1.2 U	0.89 U	0.52 U	0.65 U	1.8 U	0.93 U	1.9 U	1.7 JT
U1C-3	LW2-U1C-3	0.39 U	0.79 U	0.33 U	0.71 U	0.65 U	0.49 U	0.62 U	1.3 U	0.55 U	1.4 U	1.4 UT
U2C-1	LW2-U2C-1	1.2 J	7.7	9.7	12	11	3.9	12	33	8.6	29	128 JT
U2C-2	LW2-U2C-2	2.2 J	20	18	25	11	9.1	23	27	9.7	28	173 JT
U2C-3	LW2-U2C-3	0.41 U	2 U	2 U	2.9 U	2 U	0.87 U	3.4 U	4.4 U	1.2 U	4.9 U	4.9 UT
U3C-1	LW2-U3C-1	0.46 U	2.1 U	2 U	2.6 U	1.7 U	0.74 U	1.9 U	4 U	1.3 U	4.6 U	4.6 UT
U3C-2	LW2-U3C-2	0.49 J	2.6 U	2.6 U	4.3 U	2.9 U	1.1 U	3.7 U	5.6 U	2.4 U	5.9	6.39 JT
U3C-3	LW2-U3C-3	0.58 J	3.3 U	5.2	6.5	4.9	2.1 U	4.6 U	8.6	3.6	9.8	39.2 JT
U4Q-1	LW2-U4Q-1	1.7 J	7.8	9.1	12	8.5	4.1 J	11	18	7.8	17	97 JT
U4Q-2	LW2-U4Q-2	1.6 J	11	12	16	7.5	5.2	13	18	6.4	17	108 JT
U4Q-3	LW2-U4Q-3	0.92 J	6	6.7	7.9	4.8	2.3 U	7	8.6	4.1	9.5	55.5 JT
U5Q-1	LW2-U5Q-1	0.38 U	0.24 U	0.94 U	0.7 U	1 U	0.48 U	0.6 U	0.77 U	0.67 U	0.77 U	1 UT
U5Q-2	LW2-U5Q-2	0.38 U	3.4 U	1.5 U	2.9 U	0.69 U	0.74 U	2.8 U	2.5 U	0.64 U	2.4 U	3.4 UT
U5Q-3	LW2-U5Q-3	0.39 U	0.79 U	0.33 U	0.71 U	0.45 U	0.49 U	1 U	0.96 U	0.36 U	1.1 U	1.1 UT

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

CAS No		53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	
Chemical Name		**Dibenz(a,h)anthracene**	**Benz(a)anthracene**	**Benzo(a)pyrene**	**Benzo(b)fluoranthene**	**Benzo(g,h,i)perylene**	**Benzo(k)fluoranthene**	**Chrysene**	**Fluoranthene**	**Indeno(1,2,3-cd)pyrene**	**Pyrene**	**HIgh Molecular Weight PAHs**
Unit		**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**	**ug/kg**
Location	**Sample ID**											
U6TOC-1	LW2-U6TOC-1	0.63 J	3 U	3.7 U	4.8 U	3.8 U	1.2 U	3.3 U	6.4	2.7 U	7.5	14.5 JT
U6TOC-2	LW2-U6TOC-2	1.2 J	6.4	7	11 U	6.5	3.5 U	9.7 U	13	5.1	15	54.2 JT
U6TOC-3	LW2-U6TOC-3	1.1 J	4.7 U	6.2	7.5	5.5	2.6 J	6.3	9.2	5.2	9.3	52.9 JT
Subsurface Sediment Samples												
C009	LW2-C009-B	10	48	77	58	80	48	75	59	67	85	607 T
C009	LW2-C009-C	6.5	27	54	35	53	30	33	55	44	61	399 T
C011-1	LW2-C011-B1	12.8 T	49.5 T	85 T	86 T	89.5 T	28.5 T	79 T	88.5 T	84.5 T	103 T	706 T
C011-1	LW2-C011-C1	16.5 T	66 T	105 T	95 T	99.5 T	30 T	93 T	215 T	89 T	245 T	1050 T
C011-1	LW2-C011-D1	41.5 T	260 T	210 T	170 T	180 T	45.5 T	425 T	485 T	117 T	905 T	2840 T
C011-2	LW2-C011-B2	8.7	31	54	53	65	16	51	42	57	59	437 T
C011-2	LW2-C011-C2	35	130	210	230	210	70	220	220	180	270	1780 T
C011-2	LW2-C011-D2	13	52	81	74	82	23	67	170	79	200	841 T
C011-2	LW2-C011-E2	15	90	120	110	100	34	120	130	92	260	1070 T
C015	LW2-C015-B	15	74	130	86	120	75	100	180	110	200	1090 T
C015	LW2-C015-C	11	93	92	69	76	37	140	210	61	270	1060 T
C015	LW2-C015-D	46	340	430	260	380	240	520	860	320	1100	4500 T
C019-1	LW2-C019-B1	64	480	590	490	470	300	690	1200	440	1200	5920 T
C019-1	LW2-C019-C1	27	130	200	170	170	90	180	240	150	300	1660 T
C020	LW2-C020-B	26	220	190	190	140	150	370	500	130	440	2360 T
C020	LW2-C020-C	36	180	320	230	270	170	250	220	240	310	2230 T
C022	LW2-C022-B	5.5	32	38	34	31	28	38	60	29	56	352 T
C022	LW2-C022-C	6.5	27	40	40	36	25	37	53	34	52	351 T
C025-1	LW2-C025-B1	0.64 J	4.4	4.9	4.1	3.6	3.7	5.3	7.7	3.2	8.1	45.6 JT
C025-1	LW2-C025-C1	0.41 U	0.26 U	0.35 U	0.76 U	0.37 U	0.52 U	0.65 U	0.54 U	0.38 U	0.57 U	0.76 UT
C025-2	LW2-C025-D2	0.34 U	0.51 J	0.29 U	0.62 U	0.3 U	0.43 U	0.53 U	0.73 J	0.31 U	0.86 J	2.1 JT
C027	LW2-C027-B	4.5	47	42	32	28	37	68	130	27	130	546 T
C027	LW2-C027-C	0.92 J	9.9	8.7	8.6	7.8	6.8	14	37	6.2	32	132 JT
C034	LW2-C034-B	3.6	27	32	40	20	22	46	120	19	99	429 T
C034	LW2-C034-C	6	50	52	43	42	34	64	210	37	200	738 T
C034	LW2-C034-E	12	120	120	80	88	70	160	300	77	360	1390 T
C038	LW2-C038-B	14	88	110	100	120	29	120	170	110	290	1150 T
C038	LW2-C038-C	2.2 J	12	17	14	18	4.5	17	10	17	44	156 JT
C038	LW2-C038-D	0.48 J	2.6	2.9	3.2	2.3 J	1.1 J	2.4 J	4.1	2.7	4.5	26.3 JT
C060	LW2-C060-B	170	1100	1700	1100	1600	1000	1600	3100	1300	3600	16300 T
C060	LW2-C060-C	360	3300	4600	3200	4100	2000	4200	13000	3500	14000	52300 T
C061	LW2-C061-B	8.6	63	70	67	60	58	94	140	54	160	775 T
C061	LW2-C061-C	43	330	410	270	330	240	440	640	300	860	3860 T
C061	LW2-C061-E	0.57 J	5.1	7	4.4	7.1	4	7.8	17	5	26	84 JT
C062	LW2-C062-B	4	22	24	23	23	6.7	36	20	18	65	242 T
C062	LW2-C062-C	1.7 J	11	15	14	19	4.6	14	20	13	40	152 JT
C062	LW2-C062-D	0.35 U	0.22 U	0.3 U	0.64 U	0.31 U	0.44 U	0.55 U	0.46 U	0.32 U	0.48 U	0.64 UT
C064	LW2-C064-B	37	220	360	320	440	100	300	830	390	1000	4000 T
C064	LW2-C064-C	0.64 J	3	5.7	5.1	7.3	1.5 J	3.7	7.4	6.2	10	50.5 JT
C064	LW2-C064-G											
C066	LW2-C066-B	2.4 J	10	17	17	17	5.6	14	20	17	27	147 JT
C066	LW2-C066-C	0.38 U	0.98 J	1.4 J	1.4 J	1.5 J	0.48 J	0.76 J	0.57 J	1.4 J	0.92 J	9.41 JT
C067	LW2-C067-B	25	120	150	180	130	56	140	330	120	280	1530 T
C067	LW2-C067-D	130	710	950	870	920	300	900	2400	780	2800	10800 T
C067	LW2-C067-E	39	220	380	360	460	110	280	660	360	900	3770 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	HIgh Molecular Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
C073	LW2-C073-B	2.8	11	16	17	21	10	22	33	16	51	200 T
C073	LW2-C073-C	19	180	190	120	140	120	250	380	120	420	1940 T
C073	LW2-C073-D	120	1100	1400	840	1200	840	1500	2600	1000	3800	14400 T
C074	LW2-C074-B	4.4	17	25	26	25	8.6	22	34	24	43	229 T
C074	LW2-C074-C	2.1 J	10	13	15	13	5.8	14	16	9.7	23	122 JT
C074	LW2-C074-D	4	18	27	27	24	9	22	23	23	29	206 T
C074	LW2-C074-F	0.36 U	0.22 U	0.3 U	0.65 U	0.32 U	0.45 U	0.56 U	0.47 U	0.33 U	0.49 U	0.65 UT
C077	LW2-C077-C	160	1100	1600	980	1500	940	1400	2900	1300	3200	15100 T
C077	LW2-C077-D	3.5	29	45	28	37	26	35	43	31	54	332 T
C086	LW2-C086-B	26	100	140	150	140	99	160	220	130	210	1380 T
C086	LW2-C086-C	0.32 U	0.33 J	0.6 J	0.59 U	0.34 J	0.41 U	0.51 U	0.76 J	0.3 U	0.61 J	2.64 JT
C086	LW2-C086-D											
C093	LW2-C093-B	80	450	620	670	640	220	620	1400	540	1700	6940 T
C093	LW2-C093-C	0.43 J	0.96 J	1.4 J	1.2 J	1.8 J	0.46 U	1.2 J	2.3 J	1.5 J	2.9	13.7 JT
C105	LW2-C105-B	12	65	98	86	100	29	81	240	89	270	1070 T
C105	LW2-C105-C	0.4 U	0.6 U	0.34 U	0.73 U	0.47 J	0.51 U	0.63 U	0.8 J	0.5 J	0.84 J	2.61 JT
C111-1	LW2-C111-B	15	78	98	110	81	38	91	140	74	140	865 T
C111-1	LW2-C111-C	13	78	94	100	85	36	96	250	76	240	1070 T
C111-1	LW2-C111-F	37	250	380	360	400	110	320	870	330	1100	4160 T
C111-2	LW2-C111-B2	28	120	160	190	160	63	160	250	140	250	1520 T
C111-2	LW2-C111-C2	100	870	990	870	800	270	920	2200	710	2600	10300 T
C111-2	LW2-C111-E2	85	410	630	570	700	210	510	1200	520	1500	6340 T
C112	LW2-C112-B	26	130	190	200	160	66	150	260	150	260	1590 T
C112	LW2-C112-C	290	2300	4300	3300	4400	1100	2500	5900	3500	7900	35500 T
C112	LW2-C112-D	150	790	1000	940	930	360	970	2600	800	2900	11400 T
C121	LW2-C121-B	100	930	1200	830	1100	640	1300	3900	920	4300	15200 T
C121	LW2-C121-C	280	2500	3600	2200	3400	1800	3200	9300	2800	12000	41100 T
C121	LW2-C121-D											
C122	LW2-C122-B	52	350	420	460	410	170	490	1300	320	1200	5170 T
C122	LW2-C122-C	180	1300	1700	1500	1600	480	1700	4500	1300	5500	19800 T
C130	LW2-C130-B	630	4100	6500	5500	6000	1700	5400	15000	5100	19000	68900 T
C130	LW2-C130-C	7.2	30	61	50	70	16	39	61	57	100	491 T
C130	LW2-C130-E	0.37 U	0.68 J	0.45 J	0.68 U	0.76 J	0.47 U	0.58 U	0.85 J	0.41 J	0.91 J	4.06 JT
C133	LW2-C133-B	5.4	29	40	40	41	31	58	85	33	79	441 T
C133	LW2-C133-D	47	320	460	330	430	270	440	790	380	860	4330 T
C135	LW2-C135-B	6.1	36	46	44	45	36	68	130	38	120	569 T
C135	LW2-C135-C	30	220	300	220	250	200	350	470	220	440	2700 T
C136	LW2-C136-B	29	190	250	230	230	78	230	610	190	660	2700 T
C136	LW2-C136-C	65	440	500	460	470	170	560	1200	370	1600	5840 T
C136	LW2-C136-D	510	3600	5200	4400	4800	1400	4600	14000	4400	17000	59900 T
C138	LW2-C138-C	0.34 U	1.4 J	1.2 J	0.91 J	1.1 J	0.88 J	1.7 J	5.3	0.94 J	5	18.4 JT
C139	LW2-C139-B	10	51	82	61	81	51	70	140	72	140	758 T
C139	LW2-C139-C	14	90	100	89	89	72	140	330	81	290	1300 T
C142	LW2-C142-B	130	800	1200	1000	1000	330	1000	2000	900	2400	10800 T
C142	LW2-C142-C	1100	9900	14000	11000	13000	3700	12000	40000	11000	49000	165000 T
C144	LW2-C144-B	37	140	240	200	270	130	190	310	240	270	2030 T
C144	LW2-C144-D	54	460	710	480	590	320	610	850	510	940	5520 T
C144	LW2-C144-E											
C147	LW2-C147-B	79	600	700	620	650	230	750	1500	490	2100	7720 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	High Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**											
C147	LW2-C147-C	210	1600	2000	1700	1800	580	2100	7200	1400	8700	27300 T
C147	LW2-C147-E	1300	11000	16000	12000	15000	4100	12000	44000	12000	54000	181000 T
C148	LW2-C148-B	7.1	29	53	42	53	32	41	72	46	75	450 T
C148	LW2-C148-C	9.4	47	76	60	90	46	69	120	74	140	731 T
C148	LW2-C148-E											
C152	LW2-C152-B	17	83	130	110	150	82	120	170	130	190	1180 T
C152	LW2-C152-C	29	160	220	170	240	130	210	430	210	450	2250 T
C152	LW2-C152-E											
C155	LW2-C155-B	26	130	220	150	290	120	170	420	230	510	2270 T
C155	LW2-C155-C	42	250	590	440	890	180	340	1200	640	1600	6170 T
C155	LW2-C155-D											
C156	LW2-C156-B	23	120	180	130	180	110	180	330	160	360	1770 T
C156	LW2-C156-C	32	250	250	180	250	140	260	550	220	580	2710 T
C156	LW2-C156-F											
C157	LW2-C157-B	150	1000	1500	1000	1500	740	1300	3500	1300	4200	16200 T
C157	LW2-C157-C	68	370	670	430	810	320	480	1300	680	1600	6730 T
C158	LW2-C158-B	17	97	140	110	150	87	140	270	120	270	1400 T
C158	LW2-C158-C	48	250	400	310	340	210	330	580	320	540	3330 T
C158	LW2-C158-D	64	380	560	420	460	270	480	970	430	1100	5130 T
C158	LW2-C158-E											
C160	LW2-C160-B	50	330	600	380	640	330	460	1300	540	1500	6130 T
C160	LW2-C160-C	93	530	950	660	1100	420	700	1900	950	2400	9700 T
C161	LW2-C161-B	67	430	710	490	860	340	570	1600	690	2000	7760 T
C161	LW2-C161-C	25	160	250	180	320	120	210	620	260	790	2940 T
C161	LW2-C161-D											
C162	LW2-C162-B	35	190	290	200	250	180	250	430	230	420	2480 T
C162	LW2-C162-C	81	410	680	470	600	370	540	890	560	920	5520 T
C162	LW2-C162-D											
C163-1	LW2-C163-B1	2.2 J	24	22	12	13	15	30	51	11	64	244 JT
C163-1	LW2-C163-C1	93	540	880	640	1100	410	710	2000	890	2400	9660 T
C163-1	LW2-C163-D1											
C163-2	LW2-C163-B2	2.55 JT	27 T	26.5 T	15 T	19.5 T	18.1 T	34.5 T	88.5 T	16.5 T	97.5 T	346 JT
C163-2	LW2-C163-C2	60 T	415 T	650 T	460 T	700 T	320 T	545 T	1470 T	590 T	1850 T	7060 T
C163-2	LW2-C163-D2											
C164	LW2-C164-B	5.2	21	32	33	33	11	29	32	31	49	276 T
C164	LW2-C164-C	4.8	34	51	46	50	16	42	35	39	87	405 T
C164	LW2-C164-E	44	450	380	390	340	130	510	2200	270	1800	6510 T
C166	LW2-C166-B	19	95	150	120	180	89	140	290	150	310	1540 T
C166	LW2-C166-C	96	650	1000	840	910	460	850	1900	830	2100	9640 T
C166	LW2-C166-D	100	660	950	630	1000	530	900	2600	870	3100	11300 T
C169	LW2-C169-B	34	210	280	250	260	180	360	310	220	370	2470 T
C169	LW2-C169-C	53	300	410	310	440	250	400	770	370	900	4200 T
C169	LW2-C169-D											
C170	LW2-C170-B	50	290	480	320	620	250	390	1100	450	1300	5250 T
C170	LW2-C170-C	27	210	290	200	310	150	250	520	240	670	2870 T
C170	LW2-C170-D											
C171	LW2-C171-B	36	210	280	220	280	160	280	590	240	610	2910 T
C171	LW2-C171-C	44	250	360	260	360	190	330	680	310	740	3520 T
C171	LW2-C171-D											

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
C172	LW2-C172-B	14	90	120	100	120	85	130	250	98	270	1280 T
C172	LW2-C172-C	80	640	650	550	560	470	810	2200	510	2100	8570 T
C172	LW2-C172-E											
C173	LW2-C173-B	12	66	98	81	110	69	110	180	86	210	1020 T
C173	LW2-C173-C	29	170	240	180	260	160	230	480	210	570	2530 T
C173	LW2-C173-E											
C176	LW2-C176-B	33	200	240	260	210	87	280	750	200	710	2970 T
C176	LW2-C176-C	4.4	11	42	41	32	12	6.4	19	23	180	371 T
C176	LW2-C176-G	0.43 J	0.22 U	0.3 U	0.64 U	0.34 J	0.44 U	0.55 U	0.46 U	0.32 U	0.48 U	0.77 JT
C179	LW2-C179-B	330	3500	4500	2700	4300	2800	4600	15000	3400	17000	58100 T
C179	LW2-C179-C	380	3600	5100	3400	5100	3000	5000	16000	4000	18000	63600 T
C179	LW2-C179-D	410	3900	5300	3400	4900	3200	5400	16000	3900	17000	63400 T
C182	LW2-C182-B	150	1100	1400	910	1400	830	1500	3500	1100	4600	16500 T
C182	LW2-C182-C	69	550	640	470	740	400	770	1900	530	2600	8670 T
C184	LW2-C184-B	120	530	860	830	790	260	620	1200	750	1300	7260 T
C184	LW2-C184-C	800	7400	8300	7100	6200	2200	8600	18000	5800	26000	90400 T
C184	LW2-C184-D	26	160	260	220	290	65	200	680	250	780	2930 T
C184	LW2-C184-E											
C185	LW2-C185-B	110	730	1000	680	970	530	1000	2300	810	2800	10900 T
C185	LW2-C185-C	430	3200	5100	3600	5200	2400	4600	12000	4000	15000	55500 T
C185	LW2-C185-D											
C192	LW2-C192-B	44	250	360	360	310	130	340	800	270	790	3650 T
C192	LW2-C192-C	350	2900	3800	3300	3100	1000	3600	9600	2600	11000	41300 T
C192	LW2-C192-D	350	680	790	640	640	2.2 U	1100	1500	490	1600	7790 T
C196	LW2-C196-B	28	250	260	160	180	140	310	520	170	660	2680 T
C196	LW2-C196-C	2.6	16	22	14	19	12	21	35	16	45	203 T
C197	LW2-C197-B	86	590	670	650	490	210	690	1400	420	1500	6710 T
C197	LW2-C197-C	150	1200	1600	1400	1500	460	1500	4600	1200	5500	19100 T
C197	LW2-C197-D	0.62 J	5.2	7.1	6.1	7.6	2.1 J	6.5	14	5.8	19	74 JT
C199	LW2-C199-B	82	520	620	770	500	290	680	1500	430	1400	6790 T
C199	LW2-C199-C	2.8	15	20	21	20	6.5	21	35	18	43	202 T
C199	LW2-C199-E											
C202	LW2-C202-B	91	730	760	670	540	360	830	2100	520	2200	8800 T
C202	LW2-C202-C	250	1600	2300	1400	2200	1500	2200	6500	2100	8000	28100 T
C202	LW2-C202-D											
C203	LW2-C203-B	82	400	570	450	460	370	490	860	460	720	4860 T
C203	LW2-C203-C	230	1400	1700	1200	1400	1200	1900	4600	1500	5000	20100 T
C203	LW2-C203-E	8.1	65	91	58	100	50	96	260	78	310	1120 T
C206	LW2-C206-B	110	840	980	1000	760	370	950	3000	680	2500	11200 T
C206	LW2-C206-C	0.32 U	1.1 J	0.78 J	0.89 J	0.76 J	0.41 U	1 J	3.4	0.59 J	3.9	12.4 JT
C206	LW2-C206-D											
C207-1	LW2-C207-B	230	960	1500	730	1400	1100	1300	2700	1400	3300	14600 T
C207-1	LW2-C207-C	7.1	70	70	51	69	40	110	400	55	450	1320 T
C207-1	LW2-C207-D	11	87	110	78	130	64	130	330	96	400	1440 T
C207-2	LW2-C207-B2	255 T	1650 T	2350 T	1450 T	2050 T	1500 T	2300 T	5550 T	2050 T	6250 T	25400 T
C207-2	LW2-C207-C2	16.5 T	125 T	170 T	120 T	190 T	88.5 T	180 T	455 T	145 T	530 T	2020 T
C210	LW2-C210-B	2 J	11	20	17	23	5.5	16	32	20	45	192 JT
C210	LW2-C210-C	0.37 U	0.23 U	0.31 U	0.67 U	0.42 J	0.46 U	0.57 U	0.48 U	0.38 J	0.51 J	1.31 JT
C210	LW2-C210-E											

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	HIgh Molecular Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
C213	LW2-C213-B	0.96 J	4.9	11	9.6	14	3.1	6.6	6.7	10	19	85.9 JT
C213	LW2-C213-C	16	100	200	170	220	49	130	170	170	440	1670 T
C213	LW2-C213-D	0.48 J	2.8	4.8	5.4	8.3	1.8 J	3.6	5.9	5.8	10	48.9 JT
C215	LW2-C215-B	0.68 U	5.6	6.6	5.8	7	4.9	7.9	16	5.2	27	86 T
C215	LW2-C215-C	0.34 U	0.52 U	0.41 U	0.62 U	0.4 U	0.43 U	0.53 U	1.5 U	0.31 U	1.5 U	1.5 UT
C220	LW2-C220-B	180	1700	1900	1300	1600	1000	2300	6400	1400	8500	26300 T
C220	LW2-C220-C	86	460	820	520	780	420	640	830	680	1100	6340 T
C221	LW2-C221-B	410	4900	5800	3800	4700	3400	6500	19000	3800	22000	74300 T
C221	LW2-C221-C	170	1800	2300	1400	1900	1200	2300	6600	1600	7300	26600 T
C228	LW2-C228-B	340	3100	4400	3800	3700	1300	4000	10000	3000	14000	47600 T
C231	LW2-C231-B	550	4600	6500	5700	5600	2200	6500	18000	4300	23000	77000 T
C231	LW2-C231-C	100	880	1200	1100	1100	370	1200	3300	840	4100	14200 T
C232	LW2-C232-B	0.33 UJ	4 J	4.9 J	6 J	3.1 J	0.41 UJ	6.8 J	14 J	1.8 J	20 J	60.6 JT
C232	LW2-C232-C	1.3 J	13 J	17 J	23 J	11 J	0.44 UJ	21 J	50 J	10 J	64 J	210 JT
C240	LW2-C240-B	120	720	1100	790	1200	730	1100	1700	900	1700	10100 T
C240	LW2-C240-D	750	6300	9300	5900	9100	4900	8400	26000	6800	33000	110000 T
C240	LW2-C240-E	470	3100	5700	3600	5900	2700	4400	9800	4700	13000	53400 T
C244	LW2-C244-B	37	250	360	330	320	200	340	540	300	510	3190 T
C244	LW2-C244-C	28	260	270	280	230	160	340	970	210	780	3530 T
C245	LW2-C245-B	540	4200	5600	5200	4600	1800	5100	12000	4100	15000	58100 T
C245	LW2-C245-C	18	110	210	180	250	55	140	520	180	630	2290 T
C245	LW2-C245-D	37	350	510	450	500	150	450	1300	400	1700	5850 T
C245	LW2-C245-E	14	86	160	140	190	42	120	360	140	440	1690 T
C247	LW2-C247-B	0.37 U	1 J	0.88 J	0.68 U	0.68 J	0.47 U	0.93 J	4.6	0.56 J	4.9	13.6 JT
C247	LW2-C247-C	0.38 U	0.45 J	0.32 U	0.69 U	0.33 U	0.48 U	0.59 U	1.1 J	0.35 U	1.1 J	2.65 JT
C247	LW2-C247-D	0.37 U	0.23 U	0.31 U	0.68 U	0.33 U	0.47 U	0.58 U	0.48 J	0.34 U	0.51 U	0.48 JT
C252	LW2-C252-B	150	1100	1600	920	1300	920	1500	2500	1100	3100	14200 T
C252	LW2-C252-C	56	380	530	360	500	290	490	950	410	1200	5170 T
C254	LW2-C254-B	49	210	320	290	320	170	260	490	300	450	2860 T
C254	LW2-C254-C	0.97 J	4.2	6.6	6.3	6.3	3.4	5.7	8.6	5.3	11	58.4 JT
C255	LW2-C255-B	0.34 U	0.96 J	0.96 J	1 J	0.9 J	0.48 J	1.1 J	1.3 J	0.76 J	1.3 J	8.76 JT
C255	LW2-C255-C	0.34 U	0.21 U	0.29 U	0.62 U	0.3 U	0.43 U	0.53 U	0.44 U	0.31 U	0.46 U	0.62 UT
C257	LW2-C257-B	140	970	1100	1200	840	410	1200	2900	780	2600	12100 T
C258	LW2-C258-B	2200	17000	25000	15000	20000	15000	23000	56000	18000	59000	250000 T
C258	LW2-C258-C	1700	13000	19000	12000	17000	11000	17000	50000	15000	52000	208000 T
C260	LW2-C260-B	28	120	190	170	220	99	170	300	180	360	1840 T
C260	LW2-C260-C	11	59	90	61	96	57	81	130	82	170	837 T
C263	LW2-C263-B	1800	10000	10000	10000	14000	8800	15000	42000	11000	48000	171000 T
C263	LW2-C263-C											
C263	LW2-C263-D	2400	26000	30000	17000	22000	18000	34000	55000	20000	65000	289000 T
C264	LW2-C264-B	13000	95000	110000	72000	75000	58000	120000	180000	70000	220000	1010000 T
C264	LW2-C264-C	6100	41000	54000	46000	34000	33000	44000	96000	37000	96000	487000 T
C264	LW2-C264-D											
C266	LW2-C266-B	0.31 U	0.56 J	0.51 J	0.56 U	0.59 J	0.39 U	0.51 J	0.57 J	0.48 J	0.69 J	3.91 JT
C266	LW2-C266-C	0.31 U	0.19 U	0.27 U	0.57 U	0.28 U	0.4 U	0.49 U	0.41 U	0.29 U	0.43 U	0.57 UT
C267	LW2-C267-B	16	110	110	99	100	71	130	370	93	300	1400 T
C267	LW2-C267-C	0.54 J	2.8	3.2	2.2 J	4.6	2.4 J	3.4	8.2	3.4	10	40.7 JT
C268	LW2-C268-B	0.29 U	0.22 U	0.34 J	0.53 U	0.37 J	0.36 U	0.45 U	0.6 U	0.29 J	0.58 U	1 JT
C268	LW2-C268-C	0.29 U	0.18 U	0.25 U	0.53 U	0.26 U	0.37 U	0.46 U	0.38 U	0.27 U	0.4 U	0.53 UT

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
C269	LW2-C269-B	560	3200	4800	4000	4200	1300	4500	8300	3400	9700	44000 T
C269	LW2-C269-C	390	3900	4300	3800	3500	1300	5000	16000	3000	19000	60200 T
C269	LW2-C269-F	1200	10000	16000	14000	14000	4400	13000	46000	12000	56000	187000 T
C270	LW2-C270-B	4100	32000	41000	27000	34000	26000	40000	88000	29000	110000	431000 T
C270	LW2-C270-C	1600	13000	18000	13000	16000	10000	17000	44000	13000	54000	200000 T
C272	LW2-C272-B	0.62 J	6.4	7	4.9	4.9	5.5	9.1	18	3.6	27	87 JT
C272	LW2-C272-C	11	110	150	86	110	95	150	120	91	200	1120 T
C273	LW2-C273-B	8700	95000	140000	130000	120000	39000	130000	430000	97000	550000	1740000 T
C273	LW2-C273-C	3000	31000	49000	42000	47000	13000	39000	130000	36000	170000	560000 T
C273	LW2-C273-D											
C276	LW2-C276-B	1500	11000	14000	9500	13000	7900	13000	32000	11000	40000	153000 T
C276	LW2-C276-C	21000	210000	260000	180000	200000	150000	310000	840000	170000	970000	3310000 T
C276	LW2-C276-D											
C277	LW2-C277-B	8.6	50	42	53	41	36	74	140	36	110	591 T
C277	LW2-C277-C	8.7	230	76	130	36	44	260	1300	31	910	3030 T
C277	LW2-C277-D	29	230	170	140	140	130	260	1000	130	810	3040 T
C278	LW2-C278-B	1500	11000	17000	14000	14000	4700	13000	34000	13000	44000	166000 T
C278	LW2-C278-C	2800	26000	33000	27000	25000	9100	29000	79000	25000	110000	366000 T
C278	LW2-C278-D	4.7	24	34	29	33	9.6	27	71	34	90	356 T
C280	LW2-C280-B	18	130	150	170	140	55	160	500	120	470	1910 T
C280	LW2-C280-C	45	380	350	390	220	130	360	930	210	740	3760 T
C280	LW2-C280-D	48	330	350	330	170	110	340	680	190	570	3120 T
C282	LW2-C282-B	0.72 J	4	6	6.2	7	2.2	5.1	10	5	14	60.2 JT
C282	LW2-C282-C	0.33 U	0.84 J	1.1 J	0.88 J	0.81 J	0.41 U	0.82 J	2.5	0.62 J	2.8	10.4 JT
C282	LW2-C282-D	0.34 U	0.21 U	0.29 U	0.62 U	0.3 U	0.43 U	0.53 U	0.44 U	0.31 U	0.47 U	0.62 UT
C283	LW2-C283-B	3200 J	30000 J	31000 J	28000 J	25000 J	13000 J	34000 J	130000 J	22000 J	160000 J	476000 JT
C283	LW2-C283-C	2300 J	19000 J	25000 J	21000 J	23000 J	9400 J	22000 J	80000 J	19000 J	110000 J	331000 JT
C283	LW2-C283-E	4 J	33 J	26 J	27 J	13 J	15 J	31 J	43 J	12 J	60 J	264 JT
C284	LW2-C284-B	1900	21000	22000	15000	19000	13000	26000	75000	15000	95000	303000 T
C284	LW2-C284-C	30000	280000	340000	230000	280000	190000	390000	1100000	240000	1300000	4380000 T
C284	LW2-C284-D	250	2300	3000	1900	2600	1800	2600	10000	2100	12000	38600 T
C284	LW2-C284-E											
C288	LW2-C288-B	5400	56000	76000	69000	55000	22000	71000	260000	49000	300000	963000 T
C288	LW2-C288-C	2200	21000	29000	26000	23000	8500	26000	83000	20000	100000	339000 T
C288	LW2-C288-D	1500	14000	23000	19000	22000	6100	17000	56000	17000	74000	250000 T
C289	LW2-C289-B	2100	21000	21000	17000	14000	5600	23000	68000	14000	81000	267000 T
C289	LW2-C289-C	1900	17000	21000	17000	16000	5300	19000	60000	15000	72000	244000 T
C289	LW2-C289-E	0.94 J	5.8	6.6	5.3	5.7	2 J	6.9	17	5.6	22	77.8 JT
C290	LW2-C290-B	1.3 J	16	11	12	9.9	6.4	18	75	8.1	53	211 JT
C290	LW2-C290-C	0.36 U	0.75 U	0.59 J	0.67 U	0.43 J	0.46 U	0.72 J	1.6 U	0.44 J	1.6 U	2.18 JT
C291	LW2-C291-B	4.6	26	29	41	26	14	33	57	21	60	312 T
C291	LW2-C291-C	9.1	95	51	81	37	45	120	450	36	290	1210 T
C293-1	LW2-C293-B	35	730	250	460	100	170	780	4500	110	3100	10200 T
C293-1	LW2-C293-C	50	500	390	360	370	220	560	3100	320	2400	8270 T
C293-1	LW2-C293-D	30	170	190	170	170	99	190	360	150	300	1830 T
C293-2	LW2-C293-B2	54	1100	380	440	250	350	1100	8100	230	4800	16800 T
C293-2	LW2-C293-C2	10	73	110	100	110	34	110	230	86	290	1150 T
C294	LW2-C294-B	27000	200000	260000	200000	190000	64000	220000	800000	190000	960000	3110000 T
C294	LW2-C294-C	2000	18000	24000	20000	18000	6500	22000	72000	18000	86000	287000 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**											
C294	LW2-C294-D	150 J	800	1400	1100	1500	360	990	2900	1300	3800	14300 JT
C295	LW2-C295-B	15	110	75	130	52	42	160	410	56	310	1360 T
C295	LW2-C295-C	240	1800	1500	1500	1300	470	2100	6700	1200	6300	23100 T
C299	LW2-C299-B	3600	35000	44000	25000	36000	26000	43000	130000	29000	160000	532000 T
C299	LW2-C299-C	6700	66000	85000	50000	72000	54000	86000	260000	59000	360000	1100000 T
C3002	LW2-C300-B	7.9	42	63	61	53	21	54	100	44	120	566 T
C3002	LW2-C300-C	24	170	220	210	210	69	240	640	170	730	2680 T
C3002	LW2-C300-D	52	510	580	510	420	170	610	1700	360	2100	7010 T
C301	LW2-C301-B	15000 J	150000 J	150000 J	130000 J	95000 J	51000 J	170000 J	700000 J	93000 J	840000 J	2390000 JT
C301	LW2-C301-C	66000 J	600000 J	690000 J	590000 J	500000 J	240000 J	690000 J	2900000 J	490000 J	3600000 J	10400000 JT
C301	LW2-C301-D	24000 J	180000 J	220000 J	170000 J	140000 J	86000 J	240000 J	790000 J	120000 J	970000 J	2940000 JT
C301	LW2-C301-E	37000 J	440000 J	470000 J	440000 J	280000 J	180000 J	490000 J	1800000 J	280000 J	2200000 J	6620000 JT
C301	LW2-C301-G	4300 J	46000 J	71000 J	60000 J	55000 J	18000 J	59000 J	250000 J	49000 J	320000 J	932000 JT
C302	LW2-C302-B	3000 J	29000 J	28000 J	17000 J	21000 J	17000 J	38000 J	93000 J	18000 J	120000 J	384000 JT
C302	LW2-C302-C	67000	760000	940000	580000	730000	540000	980000	3500000	610000	4700000	13400000 T
C302	LW2-C302-D											
C305-1	LW2-C305-B1	1300	13000	14000	11000	9900	3900	16000	41000	9500	54000	174000 T
C305-1	LW2-C305-C1	120 J	880	1100 J	850 J	890 J	290 J	1000	2800	870 J	3800	12600 JT
C305-1	LW2-C305-D1	90 J	740	930 J	780 J	840 J	260 J	850	2900	810 J	3600	11800 JT
C305-2	LW2-C305-B2	2100	24000	22000	17000	13000	5800	26000	75000	14000	90000	289000 T
C305-2	LW2-C305-C2	1600	16000	17000	14000	12000	4700	19000	53000	12000	66000	215000 T
C305-2	LW2-C305-D2	36	250 J	300 J	230 J	240 J	75 J	290 J	430 J	250 J	570 J	2670 JT
C311	LW2-C311-B	1100 J	10000 J	12000 J	10000 J	11000 J	4600 J	11000 J	36000 J	8700 J	50000 J	154000 JT
C311	LW2-C311-C	180 J	1400 J	2100 J	1900 J	1800 J	580 J	1900 J	5600 J	1700 J	6300 J	23500 JT
C311	LW2-C311-E	98 J	740 J	1300 J	1000 J	1400 J	300 J	860 J	2200 J	1000 J	3000 J	11900 JT
C313	LW2-C313-B	2.4	16	23	16	24	13	22	57	19	61	253 T
C313	LW2-C313-C	0.37 U	0.92 J	1.1 J	0.73 J	1.1 J	0.62 J	1.2 J	2.2 J	0.88 J	2.2 J	11 JT
C314	LW2-C314-B	79	510	630	490	550	330	740	2000	480	1800	7610 T
C314	LW2-C314-C	180	1300	1600	1000	1400	1000	1900	5600	1100	6000	21100 T
C314	LW2-C314-D											
C316	LW2-C316-B	300	8100	3100	3200	1200	3200	8700	48000	1300	40000	117000 T
C316	LW2-C316-C	810	7200	7100	5000	5600	4300	10000	21000	4900	25000	90900 T
C316	LW2-C316-D	2700	21000	27000	16000	23000	16000	26000	74000	21000	90000	317000 T
C323	LW2-C323-B	24	160	190	150	150	110	190	460	140	430	2000 T
C323	LW2-C323-C	2.4 J	14	18	12	14	13	21	40	12	40	186 JT
C323	LW2-C323-D	4.9	44	43	33	39	29	66	130	33	170	592 T
C323	LW2-C323-E											
C324	LW2-C324-B	5.5	33	45	30	39	31	41	85	34	85	429 T
C324	LW2-C324-D	23	150	210	130	190	130	190	440	170	450	2080 T
C324	LW2-C324-E	130	910	1300	920	1200	600	1200	2700	950	3000	12900 T
C326	LW2-C326-B	25	160	180	140	120	130	180	330	130	280	1680 T
C326	LW2-C326-C	0.4 J	3.7	4.4	4	1.9 J	3.7	4.8	3.8	1.8 J	14	42.5 JT
C326	LW2-C326-D											
C327	LW2-C327-B	19	240	160	140	100	120	300	1200	100	780	3160 T
C327	LW2-C327-C	10	78	79	61	64	57	110	280	59	240	1040 T
C327	LW2-C327-D											
C329	LW2-C329-B	25	590	260	270	97	190	820	4300	110	3200	9860 T
C329	LW2-C329-C	360	7200	3200	3300	1000	2800	8800	36000	1300	28000	92000 T
C329	LW2-C329-D	270	5500	2400	2500	660	2100	13000	30000	860	21000	78300 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
C331	LW2-C331-B	6 J	29 J	45 J	51 J	43 J	22 J	40 J	54 J	36 J	460 J	786 JT
C331	LW2-C331-C	1.7 J	27 J	16 J	23 J	10 J	13 J	33 J	98 J	8.1 J	220 J	450 JT
C331	LW2-C331-D	0.37 UJ	2.4 UJ	2.3 J	3.7 J	0.84 J	0.47 UJ	3 J	4.2 J	0.94 J	9.4 J	24.4 JT
C331	LW2-C331-E	0.39 UJ	0.24 UJ	0.33 UJ	0.71 UJ	0.34 UJ	0.49 UJ	0.61 UJ	0.5 UJ	0.36 UJ	0.53 UJ	0.71 UJT
C331	LW2-C331-G											
C332	LW2-C332-B	12	93	130	85	140	72	120	340	110	340	1440 T
C332	LW2-C332-C	0.34 U	1.2 J	1.8	1.3 J	2.2	1.4 J	1.6 J	2.8	1.3 J	4	17.6 JT
C332	LW2-C332-D											
C333	LW2-C333-B	23	140	210	140	180	120	170	290	160	370	1800 T
C333	LW2-C333-C	1.8	14	15	8.4	10	11	16	24	9.6	35	145 T
C333	LW2-C333-E	0.37 U	0.89 J	0.86 J	0.67 U	0.73 J	0.55 J	1.1 J	3.3	0.58 J	3.3	11.3 JT
C333	LW2-C333-G											
C334	LW2-C334-B	27	230	280	180	220	160	310	540	190	760	2900 T
C334	LW2-C334-C	1.7	9.5	17	12	20	9.3	11	15	15	27	138 T
C334	LW2-C334-D											
C335	LW2-C335-B	20	110	140	120	130	92	170	180	120	210	1290 T
C335	LW2-C335-C	43	270	650	450	900	240	360	1200	680	1800	6590 T
C335	LW2-C335-E											
C341	LW2-C341-B	4.1	18	27	24	29	18	25	37	24	43	249 T
C342	LW2-C342-B	10	50	52	54	51	46	72	180	48	150	713 T
C342	LW2-C342-C	8.8	46	47	49	43	35	60	140	41	120	590 T
C342	LW2-C342-D	13	110	110	63	71	67	120	220	66	260	1100 T
C346	LW2-C346-B	8.6	46	53	54	61	40	69	170	51	150	703 T
C346	LW2-C346-C	8.1	50	68	51	95	30	78	220	64	200	864 T
C347	LW2-C347-B	16	85	83	110	72	71	140	270	71	210	1130 T
C347	LW2-C347-C	25	190	150	150	98	100	220	600	100	540	2170 T
C347	LW2-C347-F	0.36 U	0.22 U	0.3 U	0.65 U	0.33 J	0.45 U	0.56 U	0.62 J	0.33 U	0.49 U	0.95 JT
C348	LW2-C348-B	21 J	140	130	180	110	62	210	430	100 J	380	1760 JT
C348	LW2-C348-C	69 J	550	570	580	550	170	700	2400	460 J	2400	8450 JT
C348	LW2-C348-D	14 J	81	120	100	97	37	87	130	88 J	210	964 JT
C349	LW2-C349-B	11	82	77	49	45	49	97	120	43	150	723 T
C349	LW2-C349-C	7.1	36	38	36	31	30	42	64	29	66	379 T
C351	LW2-C351-B	110 J	960	890	860	540	270	1000	1600	490 J	1900	8620 JT
C351	LW2-C351-C	13 J	130	110	86	46	32	130	200	46 J	260	1050 JT
C351	LW2-C351-D	0.34 U	1.2 J	0.89 J	0.96 J	0.63 J	0.49 J	0.92 J	2.3	0.49 J	2.9	10.8 JT
C351	LW2-C351-E	0.35 U	0.4 J	0.3 U	0.65 U	0.31 U	0.45 U	0.55 U	1.3 J	0.33 U	1.2 J	2.9 JT
C352	LW2-C352-B	2.4 J	11	13	14	14	10	14	25	13	21	137 JT
C352	LW2-C352-C	1.3 J	6.1	6.7	7.4	7.3	5.7	8.7	16	6.4	15	80.6 JT
C352	LW2-C352-D	0.84 J	5.9	6.5	7.6	5.2	2.8	8	12	4.3	18	71.1 JT
C356	LW2-C356-B	8.9 J	49 J	52 J	68 J	45 J	34 J	59 J	100 J	43 J	120 J	579 JT
C356	LW2-C356-C	28 J	220 J	130 J	230 J	110 J	80 J	280 J	780 J	100 J	770 J	2730 JT
C356	LW2-C356-E	2.7 J	27 J	21 J	23 J	13 J	10 J	26 J	40 J	12 J	63 J	238 JT
C357	LW2-C357-B	2.6	14	19	15	21	14	18	43	18	47	212 T
C357	LW2-C357-C	1.2 J	5.7	7.2	6.4	8.7	5.4	7.4	15	7.2	18	82.2 JT
C359	LW2-C359-B	4.8	22	24	33	25	16	34	53	22	44	278 T
C359	LW2-C359-C	9.2	70	54	65	47	43	96	120	39	100	643 T
C359	LW2-C359-D	21	150	140	150	130	79	240	250	110	350	1620 T
C361	LW2-C361-B	3.2	16	18	19	20	15	23	42	17	47	220 T
C362	LW2-C362-B	6.8	41	40	55	33	17	58	85	29	86	451 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
C362	LW2-C362-C	1.7 J	12	11	12	8.9	4.1	19	53	6.4	55	183 JT
C362	LW2-C362-D	1.9 J	14	11	15	8.3	5.2	31	61	6.1	53	207 JT
C364	LW2-C364-B	16	160	160	170	110	56	170	450	96	460	1850 T
C364	LW2-C364-C	37	260	500	420	500	140	320	980	400	1100	4660 T
C366-1	LW2-C366-B1	22 T	245 T	135 T	180 T	64.5 T	59 T	325 T	995 T	56.5 T	795 T	2880 T
C366-1	LW2-C366-C1	19 T	110 T	86.5 T	93.5 T	52 T	30 T	200 T	305 T	44 T	310 T	1250 T
C366-1	LW2-C366-D1	7.65 T	39.5 T	39 T	40 T	26 T	13.8 T	49.5 T	82 T	24.5 T	99 T	421 T
C366-1	LW2-C366-E1	8.6 T	36.5 T	50 T	53.5 T	40 T	18 T	45 T	88.5 T	37 T	94.5 T	472 T
C366-1	LW2-C366-G1	0.4 JT	1.07 JT	1.08 JT	1.3 JT	0.655 JT	0.45 UT	1.6 JT	1.7 JT	0.725 JT	2.45 T	11 JT
C366-2	LW2-C366-B2	15	94	77	110	48	36	110	330	52	240	1110 T
C366-2	LW2-C366-C2	22 J	200	130	180	68	62	290	390	54 J	360	1760 JT
C366-2	LW2-C366-D2	18 J	150	140	130	80	49	190	390	66 J	400	1610 JT
C366-2	LW2-C366-F2	1.3 J	8.4	8.9	8.5	6.5	2.6	9.9	14	6.3	21	87.4 JT
C368	LW2-C368-B	1.6 J	16	11	16	8.1	5.7	20	57	7.1	46	189 JT
C368	LW2-C368-C	20	93	100	98	110	35	160	230	65	410	1320 T
C368	LW2-C368-D	19	140	85	57	49	9.3	290	120	23	490	1280 T
C368	LW2-C368-E	26	120	120	110	100	38	210	200	69	550	1540 T
C371	LW2-C371-B	5.6	33	31	41	29	13	46	120	26	120	465 T
C371	LW2-C371-C	3.4	34	21	23	12	7.6	41	180	11	140	473 T
C371	LW2-C371-E	6.1	43	52	50	45	17	48	82	42	120	505 T
C372	LW2-C372-B	8.3	60	71	46	68	46	79	170	56	210	814 T
C372	LW2-C372-C	5.5	41	47	40	45	26	61	150	37	170	623 T
C373	LW2-C373-B	1.6 J	5.7	8	8.2	9.2	6.9	9.4	16	7.8	14	86.8 JT
C373	LW2-C373-C	8.9	37	43	48	40	29	47	82	39	68	442 T
C377	LW2-C377-B	4.3	21	27	33	28	11	31	51	26	53	285 T
C377	LW2-C377-C	5.2	22	25	33	26	10	36	56	22	74	309 T
C377	LW2-C377-E	44	300	260	250	220	75	490	620	170	1100	3530 T
C379	LW2-C379-B	7.6	39	44	47	40	33	51	88	38	95	483 T
C379	LW2-C379-C	6.5	35	44	41	52	26	51	110	41	130	537 T
C379	LW2-C379-D	0.39 U	0.41 J	0.33 U	0.72 U	0.35 U	0.5 U	0.62 U	0.77 J	0.36 U	0.74 J	1.92 JT
C380	LW2-C380-B	0.44 U	1.2 J	1.2 J	1.1 J	1.2 J	0.56 U	1.1 J	2.6	0.94 J	3.6	12.9 JT
C380	LW2-C380-C	0.42 U	0.49 J	0.36 U	0.78 U	0.37 U	0.54 U	0.66 U	0.86 J	0.39 U	0.99 J	2.34 JT
C382	LW2-C382-B	8.9	54	57	69	51	24	78	170	44	190	746 T
C382	LW2-C382-C	0.39 U	0.74 J	0.43 J	0.72 J	0.43 J	0.49 U	0.61 U	1.4 J	0.36 U	1.7 J	5.42 JT
C383	LW2-C383-B	3.8	20	27	31	28	9	32	100	22	140	413 T
C383	LW2-C383-C	0.4 U	0.42 J	0.34 U	0.73 U	0.35 U	0.5 U	0.63 U	0.85 J	0.37 U	1.1 J	2.37 JT
C384	LW2-C384-B	360	2000	1900	1800	1400	1400	2200	6400	1600	3800	22900 T
C384	LW2-C384-C	11	75	64	76	46	57	93	150	48	150	770 T
C386	LW2-C386-B	6.7	36	40	39	38	27	53	87	34	91	452 T
C386	LW2-C386-C	0.44 U	0.27 U	0.37 U	0.8 U	0.39 U	0.55 U	0.69 U	0.57 U	0.4 U	0.68 J	0.68 JT
C388	LW2-C388-B	0.39 U	0.24 U	0.33 U	0.72 U	0.35 U	0.5 U	0.62 U	0.51 U	0.36 U	0.54 U	0.72 UT
C388	LW2-C388-C	0.42 U	0.26 U	0.36 U	0.77 U	0.37 U	0.53 U	0.66 U	0.55 U	0.39 U	0.58 U	0.77 UT
C392	LW2-C392-B	89	510	540	690	340	250	550	1300	370	950	5590 T
C392	LW2-C392-C	5	33	35	44	32	15	47	78	26	110	425 T
C393	LW2-C393-B	25	140	160	200	110	68	200	390	110	350	1750 T
C393	LW2-C393-C	0.35 U	0.49 J	0.3 U	0.64 U	0.31 U	0.44 U	0.55 U	0.59 J	0.32 U	0.84 J	1.92 JT
C396	LW2-C396-B	0.47 J	0.7 J	0.57 J	0.72 U	0.7 J	0.54 J	0.7 J	1 J	0.61 J	1 J	6.29 JT
C396	LW2-C396-C	0.4 U	0.25 U	0.34 U	0.73 U	0.35 U	0.5 U	0.62 U	0.52 U	0.37 U	0.55 U	0.73 UT
C397	LW2-C397-B	10	46	59	51	63	44	63	100	55	120	611 T

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	**Sample ID**											
C397	LW2-C397-C	8.6 J	42 J	47 J	47 J	50 J	33 J	58 J	110 J	43 J	110 J	549 JT
C397	LW2-C397-D	5.4 J	27 J	34 J	31 J	49 J	23 J	41 J	95 J	35 J	100 J	440 JT
C400	LW2-C400-B	3.1 J	30	33	32	25	11	31	54	23	47	289 JT
C400	LW2-C400-C	5.7	24	31	47	24	23	31	47	24	47	304 T
C401	LW2-C401-B	50	160	240	310	210	100	240	350	240	330	2230 T
C401	LW2-C401-C	26	91	110	160	110	52	150	240	120	350	1410 T
C401	LW2-C401-D	22	150	87	79	50	24	240	220	30	300	1200 T
C401	LW2-C401-E	9.5	62	48	53	37	16	88	150	31	260	755 T
C402	LW2-C402-B	12	120	63	77	49	51	160	500 J	41	410 J	1480 JT
C402	LW2-C402-C	1.9 J	18	11	12	7.3	11	22	50	7.3	58	199 JT
C403	LW2-C403-B	4.7	22	28	28	30	8.6	31	58	26	80	316 T
C403	LW2-C403-C	0.42 J	2.3 J	2.4 J	2.4 J	1.4 J	1.1 J	1.9 J	1.9 J	1.6 J	2.4 J	17.8 JT
C403	LW2-C403-D	0.39 U	0.31 J	0.33 U	0.72 U	0.35 U	0.5 U	0.62 U	0.86 J	0.36 U	0.54 U	1.17 JT
C403	LW2-C403-F											
C405	LW2-C405-B	8	71	55	100	35	34	140	97	33	130	703 T
C405	LW2-C405-C	19	140	120	180	92	56	180	340	81	320	1530 T
C409	LW2-C409-B	14	69	75	98	59	37	93	180	56	150	831 T
C409	LW2-C409-C	21	110	120	160	96	58	160	230	92	240	1290 T
C413-1	LW2-C413-B1	3.6	18	26	29	25	11	24	51	20	61	269 T
C413-1	LW2-C413-C1	3.8	18	26	28	31	9.2	27	66	23	85	317 T
C413-2	LW2-C413-B2	6.2	35	44	49	34	17	48	89	30	110	462 T
C413-2	LW2-C413-C2	2.6	13	18	21	16	7.3	18	37	13	46	192 T
C413-2	LW2-C413-D2	5.5	30	45	49	51	15	48	140	39	160	583 T
C415	LW2-C415-B	12	58	87	73	77	23	77	89	68	140	704 T
C415	LW2-C415-C	0.35 U	0.3 J	0.3 U	0.65 U	0.31 U	0.45 U	0.56 U	0.49 J	0.33 U	0.49 U	0.79 JT
C415	LW2-C415-D	0.36 U	0.53 J	0.34 J	0.67 U	0.35 J	0.46 U	0.57 U	1.1 J	0.43 J	1.5 J	4.25 JT
C417	LW2-C417-B	9.8	43	65	77	64	27	61	96	52	120	615 T
C417	LW2-C417-D	33	230	220	260	130	93	240	490	130	440	2270 T
C420	LW2-C420-B	17	81	87	92	79	64	110	180	76	170	956 T
C420	LW2-C420-C	18	80	87	83	75	76	94	210	79	170	972 T
C421	LW2-C421-B	39	390	250	350	150	220	460	1600	160	1200	4820 T
C421	LW2-C421-C	8.7	60	58	46	48	40	75	120	43	140	639 T
C425-1	LW2-C425-B1	4.95 T	25.5 T	33 T	41.5 T	34.5 T	13 T	39.5 T	78.5 T	25 T	97.5 T	393 T
C425-1	LW2-C425-C1	62.9 T	411 T	443 T	526 T	248 T	199 T	477 T	788 T	252 T	700 T	4110 T
C425-1	LW2-C425-E1	5.9 T	38 T	54 T	52.5 T	45.5 T	18 T	43.5 T	84.5 T	39.5 T	102 T	483 T
C425-2	LW2-C425-B2	6.6	29	38	49	37	17	47	99	31	100	454 T
C425-2	LW2-C425-C2	2.7	20	22	24	18	8.3	22	44	15	56	232 T
C425-2	LW2-C425-D2	23	150	180	220	140	75	170	280	120	270	1630 T
C426	LW2-C426-B	6.8	33	44	55	41	18	47	99	33	100	477 T
C426	LW2-C426-C	0.34 U	0.88 J	0.92 J	1.2 J	1 J	0.43 U	0.87 J	1.9 J	0.72 J	2.7	10.2 JT
C430	LW2-C430-B	4	18	24	28	21	9.2	24	39	20	45	232 T
C430	LW2-C430-C	13	79	100	110	110	36	98	270	95	290	1200 T
C430	LW2-C430-E	19	90	110	130	100	43	120	190	97	210	1110 T
C431	LW2-C431-B	14	86	79	110	69	33	130	320	64	340	1250 T
C431	LW2-C431-C	24	130	170	180	190	54	160	300	170	530	1910 T
C431	LW2-C431-D	8.6	52	62	62	52	20	57	100	48	150	612 T
C434	LW2-C434-B	19	99	140	160	160	47	150	400	130	450	1760 T
C434	LW2-C434-C	1.2 J	5.6	6.4	7.1	6.9	2.4 J	6.2	10	6	20	71.8 JT
C434	LW2-C434-D	0.36 U	0.81 J	0.31 U	0.67 U	0.32 U	0.46 U	0.57 U	1 J	0.34 U	0.93 J	2.74 JT

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No	53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	
	Chemical Name	Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	HIgh Molecular Weight PAHs
	Unit	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
C436	LW2-C436-B	1.2 J	8.7	7.9	9.2	7	7.9	15	34	5.9	29	126 JT
C436	LW2-C436-C	11	63	79	63	89	59	91	220	73	230	978 T
C437	LW2-C437-B	5.9	38	46	46	38	16	47	86	32	110	465 T
C437	LW2-C437-C	0.48 J	0.91 J	0.61 J	0.88 J	0.48 J	0.52 J	0.63 J	1.1 J	0.52 J	1.1 J	7.23 JT
C437	LW2-C437-D	0.36 U	0.22 U	0.31 U	0.66 U	0.32 U	0.46 U	0.57 U	0.47 U	0.33 U	0.5 U	0.66 UT
C439	LW2-C439-B	4.5	27	26	30	26	22	57 J	73	23	64 J	353 JT
C439	LW2-C439-C	9.4	50	55	56	46	49	72	110	45	120	612 T
C439	LW2-C439-E											
C440	LW2-C440-B	1.8	7.8	11	12	10	8.3	13	14	8.5	16	102 T
C440	LW2-C440-C	11	54	61	59	47	43	67	100	49	94	585 T
C441-1	LW2-C441-B1	5	26	32	31	34	27	40	74	28	92	389 T
C441-1	LW2-C441-C1	0.37 U	0.52 J	0.48 J	0.68 U	0.57 J	0.47 U	0.58 U	1 J	0.39 J	1.5 J	4.46 JT
C441-1	LW2-C441-D1											
C441-2	LW2-C441-B2	16 T	83 T	103 T	110 T	78 T	54 T	114 T	145 T	77.5 T	180 T	961 T
C441-2	LW2-C441-C2	11 T	46.5 JT	44.4 JT	23.2 JT	20.2 JT	30.3 JT	51 JT	50 T	21.6 JT	72.2 T	370 JT
C441-2	LW2-C441-D2											
C444	LW2-C444-B	18	93	120	140	90	49	140	280	95	190	1220 T
C444	LW2-C444-C	8.9	39	50	46	50	33	49	71	46	97	490 T
C444	LW2-C444-E											
C445	LW2-C445-B	7.3	44	39	53	29	17	56	160	29	140	574 T
C445	LW2-C445-C	19	110	100	130	71	45	130	410	77	300	1390 T
C445	LW2-C445-E	8.9	56	70	82	83	24	79	230	63	260	956 T
C447	LW2-C447-B	13	60	74	65	77	49	84	95	66	170	753 T
C447	LW2-C447-C	17	130	190	130	220	100	150	390	180	550	2060 T
C447	LW2-C447-D	22 J	180 J	170 J	130 J	98 J	130 J	160 J	250 J	110 J	290 J	1540 JT
C448	LW2-C448-B	0.84 J	3.9	5.7	7.2	6.1	2.6	6	10	4.7	11	58 JT
C448	LW2-C448-C	3	27	19	30	16	13	72	72	14	61	327 T
C450	LW2-C450-B	1.3 J	5.6	6.7	7.2	8	5.2	7.7	15	6.5	15	78.2 JT
C450	LW2-C450-C	18	190	150	150	74	120	200	170	74	170	1320 T
C453	LW2-C453-B	14	120	110	200	120	0.59 U	190	410	100	470	1730 T
C453	LW2-C453-C	11	79	92	86	110	51	120	350	90	340	1330 T
C453	LW2-C453-D	7.4	43	61	43	70	39	55	130	56	160	664 T
C454	LW2-C454-B	2.5	19	18	22	22	9.5	31	93	16	110	343 T
C454	LW2-C454-C	5.1	35	50	56	58	17	46	200	44	210	721 T
C454	LW2-C454-D	9.5	62	91	85	88	32	73	190	74	200	905 T
C454	LW2-C454-E	4.8	26	42	37	38	13	33	63	33	71	361 T
C455	LW2-C455-B	49	260	210	240	200	75	450	760	150	1200	3590 T
C455	LW2-C455-C	29	160	190	230	220	69	260	590	170	770	2690 T
C455	LW2-C455-D	23	100	140	130	170	42	130	350	150	360	1600 T
C456	LW2-C456-B	2.9	15	17	23	15	9.3	20	34	14	30	180 T
C456	LW2-C456-C	98 J	620	600	790	370	270	660	1800	390	1300	6900 JT
C456	LW2-C456-D	7.4	46	68	67	72	25	60	190	59	200	794 T
C456	LW2-C456-F	27	160	220	210	190	69	190	540	160	580	2350 T
C457	LW2-C457-B	7.2	38	43	45	36	35	49 J	81	36	66 J	436 JT
C457	LW2-C457-C	150	730	840	890	600	530	810	2300	700	1800	9350 T
C457	LW2-C457-E	6.3	39	53	41	62	34	52	130	48	150	615 T
C458-1	LW2-C458-B	2.7	15	17	15	17	13	20	28	14	38	180 T
C458-1	LW2-C458-C	1.1 J	5	6.2	7.1	7.1	4.7	7.3	12	5.7	13	69.2 JT
C458-2	LW2-C458-B2	1.6 JT	7.9 T	10.4 T	9.6 T	12 T	7.8 T	11 T	21.5 T	9.1 T	22.5 T	113 JT

Table 4-10. High Molecular Weight PAH Used in HPAH Calculations for Beach, Surface, and Subsurface Sediment Samples.

CAS No		53-70-3	56-55-3	50-32-8	205-99-2	191-24-2	207-08-9	218-01-9	206-44-0	193-39-5	129-00-0	HIgh Molecular
Chemical Name		Dibenz(a,h)anthracene	Benz(a)anthracene	Benzo(a)pyrene	Benzo(b)fluoranthene	Benzo(g,h,i)perylene	Benzo(k)fluoranthene	Chrysene	Fluoranthene	Indeno(1,2,3-cd)pyrene	Pyrene	Weight PAHs
Unit		ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg	ug/kg
Location	Sample ID											
C458-2	LW2-C458-C2	1.4 JT	6.25 T	7.65 T	8.65 T	9.05 T	6.65 T	10.9 T	16 T	7.3 T	17.5 T	91.4 JT
C461	LW2-C461-B	3.7	20	24	27	25	20	31	57	22	58	288 T
C461	LW2-C461-C	5.1	24	28	33	26	21	34	72	25	62	330 T
C462	LW2-C462-B	1.9 J	10	12	12	13	9.7	13	26	11	26	135 JT
C462	LW2-C462-C	3.7	23	27	21	24	17	32	36	20	45	249 T
C468	LW2-C468-B	2.4 U	12	14	18	17	10	18	37	13	35	174 T
C468	LW2-C468-C	3.1	13	16	22	18	10	25	42	15	39	203 T
C471	LW2-C471-B	0.92 J	4.7	5.1	5.2	6.3	4.7	6.9	10	4.7	11	59.5 JT
C471	LW2-C471-C	1.3 J	6.3	7	7.3	8.1	5.6	8.3	17	6.2	17	84.1 JT
C474	LW2-C474-B	1.7 J	10	9	15	10	9.3	24	42	8.3	32	161 JT
C474	LW2-C474-C	1.1 J	5.8	6.5	6.9	7.8	5.4	7.9	18	5.9	19	84.3 JT
C477	LW2-C477-B	6.5	31	36	70	39	18	62	94	29	91	477 T
C477	LW2-C477-C	44 J	400	250	1200	120	260	1200	1800	120	1100	6490 JT
C494	LW2-C494-B	8.6	42	67	77	77	27	70	130	65	150	714 T
C494	LW2-C494-C	14	79	100	120	92	41	110	250	85	250	1140 T
C494	LW2-C494-D	80	620	1200	1000	1300	330	860	3500	1100	4700	14700 T
C494	LW2-C494-E	120 J	800	2000	1500	2700	470	1100	4800	1900	6400	21800 JT
C521	LW2-C521-B	840	6400	8200	6600	6600	2100	7400	24000	6700	28000	96800 T
C521	LW2-C521-C	21000	180000	220000	180000	170000	58000	190000	690000	170000	810000	2690000 T
C521	LW2-C521-E	66	470	620	480	470	160	480	1600	500	2000	6850 T

Notes:

J The associated numerical value is an estimated quantity.

T The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

U The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

Location	Sample ID	Diesel-Range Hydrocarbons mg/kg		Gasoline-Range Hydrocarbons mg/kg		Residual-Range Hydrocarbons mg/kg		Total-Petroleum Hydrocarbons mg/kg	
Surface Interval Sediment Samples									
G007-1	LW2-G007-1	120	JT	2.3	UT	405	JT	525	JT
G007-2	LW2-G007-2	85	J	2.4	U	390	J	475	JT
G009	LW2-G009	56	JT	1.8	U	210	UT	56	JT
G010	LW2-G010	85	J	2.4	U	380	J	465	JT
G011	LW2-G011	88	J	1.9	U	290	U	88	JT
G013	LW2-G013	100	J	2.5	U	540	J	640	JT
G015	LW2-G015	140	J	2	U	570	J	710	JT
G016	LW2-G016	82	J	2.6	UJT	450	J	532	JT
G017	LW2-G017	130	J	2.5	U	640	J	770	JT
G019	LW2-G019	53	JT	1.5	U	230	UT	53	JT
G020	LW2-G020	120	J	2.3	UJ	440	J	560	JT
G021	LW2-G021	130	J	2.6	UJ	560	J	690	JT
G022	LW2-G022	76	J	2.6	UJ	440	J	516	JT
G024	LW2-G024	92	JT	2.4	UJ	390	JT	482	JT
G025	LW2-G025	19	J	1.3	UJ	120	J	139	JT
G026	LW2-G026	94	J	2.5	U	460	J	554	JT
G027	LW2-G027	18	J	1.5	UJ	65	U	18	JT
G033	LW2-G033	61	J	1.8	UJ	280	J	341	JT
G034	LW2-G034	29	J	1.4	UJ	80	U	29	JT
G035	LW2-G035	140	J	2.1	UJT	460	J	600	JT
G038	LW2-G038	36	J	1.5	UT	180	J	216	JT
G060	LW2-G060	44	J	1.6	U	130	U	44	JT
G061	LW2-G061	92	J	2	U	370	J	462	JT
G062	LW2-G062	35	J	1.5	U	240	J	275	JT
G064	LW2-G064	35	J	1.6	U	110	U	35	JT
G066	LW2-G066	120	J			480	J	600	JT
G067	LW2-G067	77	J	1.9	U	330	J	407	JT
G073	LW2-G073	15	U	1.5	U	28	U	28	UT
G074	LW2-G074	10	JT	1.4	UT	25	UT	10	JT
G086	LW2-G086	100	J	1.9	U	410	J	510	JT
G105	LW2-G105	300	J	2.5	UT	730	J	1030	JT
G111	LW2-G111	430	J	1.9	U	1300	J	1730	JT
G114	LW2-G114	32	J	1.6	UT	130	J	162	JT
G115-1	LW2-G115-1	92	JT	1.9	UT	335	JT	427	JT
G115-2	LW2-G115-2	100	J	1.9	U	370	J	470	JT
G116	LW2-G116	98	J	2.2	U	380	J	478	JT
G118	LW2-G118	94	J	2	UT	350	J	444	JT
G121	LW2-G121	140	J	2.3	U	580	J	720	JT
G122	LW2-G122	100	J	2.3	U	470	J	570	JT
G123	LW2-G123	14	U	1.7	U	16	J	16	JT
G124	LW2-G124	100	J	1.4	UT	340	J	440	JT
G126	LW2-G126	33	J	1.4	U	47	J	80	JT
G127	LW2-G127	82	J	2.1	U	320	J	402	JT
G130	LW2-G130	47	J	1.7	U	170	J	217	JT
G133	LW2-G133	69	J	2.3	U	380	J	449	JT
G135	LW2-G135	100	J	2.2	U	570	J	670	JT
G136	LW2-G136	250	J	2.6	U	1600	J	1850	JT
G138	LW2-G138	180	J	1.6	U	1600	J	1780	JT
G139	LW2-G139	360	J	2.4	U	2400	J	2760	JT
G142	LW2-G142	38	J	1.8	U	250	J	288	JT
G144	LW2-G144	82	J	2.5	U	490	J	572	JT

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

Location	Sample ID	Diesel-Range Hydrocarbons mg/kg	Gasoline-Range Hydrocarbons mg/kg	Residual-Range Hydrocarbons mg/kg	Total-Petroleum Hydrocarbons mg/kg
	Chemical Name / Unit				
G145	LW2-G145	120 J	2.5 U	630 J	750 JT
G147	LW2-G147	22 JT	1.6 U	144 JT	166 JT
G148	LW2-G148	100 J	2.2 U	440 J	540 JT
G150	LW2-G150	750 J	8.5 J	1000 J	1760 JT
G152	LW2-G152	110 J	2.2 U	530 J	640 JT
G155	LW2-G155	300 J	5.4 U	710 J	1010 JT
G156	LW2-G156	70 J	2.1 U	300 J	370 JT
G157	LW2-G157	400 J	2.8 U	560 J	960 JT
G158	LW2-G158	77 J	2.9 U	380 J	457 JT
G160	LW2-G160	540 J	230 J	800 J	1570 JT
G161	LW2-G161	550 J	83 J	770 J	1400 JT
G162	LW2-G162	82 J	2.3 U	480 J	562 JT
G163	LW2-G163	11 UT	2.4 U	14.5 JT	14.5 JT
G164	LW2-G164	19 J	2 U	100 J	119 JT
G166	LW2-G166	20 J	1.6 U	73 J	93 JT
G169	LW2-G169	93 J	2.7 U	450 J	543 JT
G170	LW2-G170	88 J	9 U	240 J	328 JT
G171	LW2-G171	100 J	5.4 U	550 J	650 JT
G172	LW2-G172	140 J	2.6 U	640 J	780 JT
G173	LW2-G173	110 J	2.6 U	620 J	730 JT
G174	LW2-G174	70.5 JT	2.5 U	255 JT	326 JT
G176	LW2-G176	350 J	9 U	150 J	500 JT
G177	LW2-G177	110 J	2.9 U	600 J	710 JT
G178	LW2-G178	350 JT	1.5 U	555 JT	905 JT
G179	LW2-G179	2400 J	40 J	2900 J	5340 JT
G180	LW2-G180	550 J	1.4 U	710 J	1260 JT
G182	LW2-G182	138 JT	2.8 U	250 JT	388 JT
G184	LW2-G184	57 J	3.8 U	170 J	227 JT
G185	LW2-G185	85.5 JT	1.6 U	290 JT	376 JT
G187	LW2-G187	14 U	1.6 U	24 J	24 JT
G192	LW2-G192	91 J	2 U	440 J	531 JT
G196	LW2-G196	170 J	1.8 UT	400 J	570 JT
G197-1	LW2-G197-1	150 JT	1.7 U	510 JT	660 JT
G197-2	LW2-G197-2	110 J	1.8 U	410 J	520 JT
G198	LW2-G198	200 J	1.9 UT	810 J	1010 JT
G199	LW2-G199	160 J	4.5 U	630 J	790 JT
G202	LW2-G202	110 J	2.1 UJ	460 J	570 JT
G203-1	LW2-G203-1	210 JT	2.2 UT	780 JT	990 JT
G203-2	LW2-G203-2	230 J	2 U	740 J	970 JT
G204	LW2-G204	200 J	1.6 U	380 J	580 JT
G206	LW2-G206	230 J	1.9 U	740 J	970 JT
G207	LW2-G207	300 J	2.2 U	720 J	1020 JT
G209	LW2-G209	83 J	1.7 UJ	260 J	343 JT
G210	LW2-G210	1400 J	23 J	1900 J	3320 JT
G213	LW2-G213	180 J	6.6 U	450 J	630 JT
G215	LW2-G215	360 J	1.9 U	920 J	1280 JT
G219	LW2-G219	730 J	3.6 U	720 J	1450 JT
G220	LW2-G220	140 J	2.1 J	350 J	492 JT
G221	LW2-G221	1400 J	4.9 J	1200 J	2600 JT
G223	LW2-G223	130 J	2.6 U	320 J	450 JT
G227	LW2-G227	37 J	1.9 T	330 J	369 JT
G228	LW2-G228	160 J	4.4 U	590 J	750 JT

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

Location	Sample ID	Diesel-Range Hydrocarbons mg/kg		Gasoline-Range Hydrocarbons mg/kg		Residual-Range Hydrocarbons mg/kg		Total-Petroleum Hydrocarbons mg/kg	
G230	LW2-G230	81	J	2	U	360	J	441	JT
G231	LW2-G231	39.5	JT	1.6	U	220	JT	260	JT
G232	LW2-G232	96	J	1.9	UJ	540	J	636	JT
G234	LW2-G234	30	J	1.4	U	68	J	98	JT
G240	LW2-G240	350	J	2.1	UJT	1200	J	1550	JT
G242	LW2-G242	79	J	2.2	UJ	350	J	429	JT
G245	LW2-G245	110	J	2	UJ	410	J	520	JT
G247	LW2-G247	72	J	1.9	U	320	J	392	JT
G252	LW2-G252	32.5	JT	1.6	UJ	135	JT	168	JT
G256	LW2-G256	38	J	1.6	UT	110	J	148	JT
G258	LW2-G258	43	J	1.4	U	65	J	108	JT
G260	LW2-G260	63	JT	1.5	UT	134	JT	197	JT
G263	LW2-G263	200	J	8.25	JT	400	J	608	JT
G264	LW2-G264	4700	J	11	J	10000	J	14700	JT
G265	LW2-G265	49	JT	1.4	U	100	T	149	JT
G269	LW2-G269	1300	J	11	J	3600	J	4910	JT
G270-1	LW2-G270-1	1100	J	2.8	J	2000	J	3100	JT
G270-2	LW2-G270-2	1700	J	2.5	J	2200	J	3900	JT
G272	LW2-G272	49	J	1.7	U	170	J	219	JT
G273	LW2-G273	620	J	6.3	U	1000	J	1620	JT
G274	LW2-G274	940	J	1.7	U	1700	J	2640	JT
G276	LW2-G276	390	J	2.5	U	1100	J	1490	JT
G277	LW2-G277	62	J	2	UT	280	J	342	JT
G278	LW2-G278	4200	J	12	J	4400	J	8610	JT
G281	LW2-G281	10	U	1.4	U	33	U	33	UT
G283	LW2-G283	14000	J	32	J	17000	J	31000	JT
G284	LW2-G284	500	JT	2.4	U	1200	JT	1700	JT
G287	LW2-G287	45	J	1.6	U	130	J	175	JT
G288	LW2-G288	14000	J	155	JT	7600	J	21800	JT
G289	LW2-G289	630	J	2.5	U	1200	J	1830	JT
G291	LW2-G291	120	J	2.6	UT	660	J	780	JT
G292	LW2-G292	1700	J	13	U	2600	J	4300	JT
G293	LW2-G293	110	J	2.2	U	440	J	550	JT
G294-1	LW2-G294-1	20000	J	102	JT	13000	J	33100	JT
G294-2	LW2-G294-2	2600	JT	41.5	JT	3000	JT	5640	JT
G296	LW2-G296	66	J	2.3	UJ	320	J	386	JT
G297	LW2-G297	630	J	65	J	730	J	1430	JT
G298	LW2-G298	39000	J	1600	J	18000	J	58600	JT
G299	LW2-G299	210	J	5.1	U	610	J	820	JT
G300	LW2-G300	14	UT	1.5	U	13	UT	14	UT
G301	LW2-G301	460	J	5.9	U	1100	J	1560	JT
G302	LW2-G302	9000	J	120	J	6000	J	15100	JT
G303	LW2-G303	68	J	2.1	U	280	J	348	JT
G305	LW2-G305	280	J	6.7	J	630	J	917	JT
G307	LW2-G307	150	J	1.8	U	400	J	550	JT
G308	LW2-G308	330	J	6	U	310	J	640	JT
G309	LW2-G309	170	J	2.1	U	510	J	680	JT
G311-1	LW2-G311-1	1080	JT	25	JT	1330	JT	2440	JT
G311-2	LW2-G311-2	200	J	2.6	J	630	J	833	JT
G313	LW2-G313	200	J	2.6	U	530	J	730	JT
G314	LW2-G314	110	J	3.5	U	470	J	580	JT
G315	LW2-G315	190	J	4	U	490	J	680	JT

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

	Chemical Name	Diesel-Range Hydrocarbons	Gasoline-Range Hydrocarbons	Residual-Range Hydrocarbons	Total-Petroleum Hydrocarbons
	Unit	mg/kg	mg/kg	mg/kg	mg/kg
Location	Sample ID				
G316	LW2-G316	17 JT	1.6 U	47 UT	17 JT
G317	LW2-G317	20 J	1.6 U	100 J	120 JT
G320	LW2-G320	230 J	1.6 U	300 J	530 JT
G321	LW2-G321	180 J	7.75 JT	420 J	608 JT
G323	LW2-G323	43 J	1.4 U	140 J	183 JT
G339	LW2-G339	50 J	2 U	220 J	270 JT
G342	LW2-G342	55 J	4.8 U	290 J	345 JT
G345-1	LW2-G345-1	80.5 JT	2.1 UT	373 JT	454 JT
G345-2	LW2-G345-2	80 J	2.2 U	380 J	460 JT
G346	LW2-G346	96 J	2.4 U	400 J	496 JT
G347	LW2-G347	110 J	2.4 U	480 J	590 JT
G350	LW2-G350	130 J	2 U	410 J	540 JT
G351	LW2-G351	160 J	2.2 UJ	490 J	650 JT
G351-2	LW2-G351-2	132 JT	2.1 UJT	470 JT	602 JT
G352	LW2-G352	59 J	2 U	290 J	349 JT
G353-1	LW2-G353-1	140 J	2 U	400 J	540 JT
G353-2	LW2-G353-2	93 J	1.9 U	400 J	493 JT
G355	LW2-G355	250 JT	1.8 U	1000 JT	1250 JT
G367	LW2-G367	140 J	1.7 UT	400 J	540 JT
G371	LW2-G371	120 J	1.8 U	320 J	440 JT
G372-1	LW2-G372-1	99.5 JT	2.4 UJT	440 JT	540 JT
G372-2	LW2-G372-2	110 J	2.6 UJ	480 J	590 JT
G376	LW2-G376	180 J	2.6 UJ	650 J	830 JT
G377	LW2-G377	27 J	1.4 U	120 J	147 JT
G381	LW2-G381	105 JT	2.2 U	310 JT	415 JT
G382	LW2-G382	200 J	2.8 U	730 J	930 JT
G383	LW2-G383	310 JT	1.6 U	915 JT	1230 JT
G384-1	LW2-G384-1	160 JT	2.7 UT	680 JT	840 JT
G384-2	LW2-G384-2	150 J	2.5 U	660 J	810 JT
G385	LW2-G385	310 J	3.1 UJ	1300 J	1610 JT
G387	LW2-G387	93 J	2.5 U	620 J	713 JT
G390	LW2-G390	406 JT	3.1 U	1190 JT	1600 JT
G392	LW2-G392	150 J	2.2 U	550 J	700 JT
G397	LW2-G397	240 J	2.7 UJ	1100 J	1340 JT
G398	LW2-G398	84 J	2.4 UJ	470 J	554 JT
G401	LW2-G401	240 J	2.1 U	620 J	860 JT
G402	LW2-G402	260 J	4.6 U	1200 J	1460 JT
G403	LW2-G403	20 J	1.5 U	56 U	20 JT
G404	LW2-G404	170 J	2.2 UT	570 J	740 JT
G405	LW2-G405	69.5 JT	1.4 U	935 JT	1000 JT
G408	LW2-G408	550 J	3.1 UJ	1500 J	2050 JT
G416	LW2-G416	310 J	3.1 UJ	1100 J	1410 JT
G420	LW2-G420	62 J	2 U	330 J	392 JT
G425	LW2-G425	55 J	1.8 U	210 J	265 JT
G426	LW2-G426	490 J	2.9 U	1500 J	1990 JT
G430	LW2-G430	19 JT	1.3 UT	86 JT	105 JT
G432	LW2-G432	240 J	1.8 U	770 J	1010 JT
G437	LW2-G437	110 J	2.1 U	390 J	500 JT
G445	LW2-G445	610 J	2.4 U	1300 J	1910 JT
G447	LW2-G447	90 J	2 U	400 J	490 JT
G448	LW2-G448	160 J	2.5 UJ	740 J	900 JT
G450-1	LW2-G450-1	150 J	2.4 UJ	760 J	910 JT

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

Location	Sample ID	Diesel-Range Hydrocarbons mg/kg	Gasoline-Range Hydrocarbons mg/kg	Residual-Range Hydrocarbons mg/kg	Total-Petroleum Hydrocarbons mg/kg
G450-2	LW2-G450-2	170 J	2.4 UJ	760 J	930 JT
G453	LW2-G453	8400 J	100 J	18000 J	26500 JT
G454	LW2-G454	25.5 JT	2.4 U	115 JT	141 JT
G455	LW2-G455	350 J	10.7 JT	1200 J	1560 JT
G473	LW2-G473	120 J	2.1 UT	590 J	710 JT
G474	LW2-G474	63 J	2.4 UJ	420 J	483 JT
G477	LW2-G477	130 J	2 U	670 J	800 JT
G497	LW2-G497	460 J	1.9 UJ	2500 J	2960 JT
G521	LW2-G521	370 J	2.9 U	720 J	1090 JT
Subsurface Sediment Samples					
C009	LW2-C009-B	19 J	1.2 U	130 J	149 JT
C009	LW2-C009-C	63 J	1.6 U	180 J	243 JT
C011-1	LW2-C011-B1	46 JT	1.4 UT	195 JT	241 JT
C011-1	LW2-C011-C1	155 JT	2.9 UT	355 JT	510 JT
C011-1	LW2-C011-D1	1200 JT	43 JT	1350 JT	2590 JT
C011-1	LW2-C011-F1		1.5 UT		
C011-2	LW2-C011-B2	28 J	1.3 UT	150 J	178 JT
C011-2	LW2-C011-C2	97 JT	1.5 U	290 JT	387 JT
C011-2	LW2-C011-D2	130 J	2.9 U	310 J	440 JT
C011-2	LW2-C011-E2	180 J	1.5 U	270 J	450 JT
C011-2	LW2-C011-G2		1.5 U		
C015	LW2-C015-B	170 J	2.4 U	2300 J	2470 JT
C015	LW2-C015-C	280 JT	23 J	435 JT	738 JT
C015	LW2-C015-D	1700 J	36 J	1900 J	3640 JT
C015	LW2-C015-E		2.8 U		
C019-1	LW2-C019-B1	46 JT	1.2 U	230 JT	276 JT
C019-1	LW2-C019-C1	150 J	1.4 U	540 J	690 JT
C019-1	LW2-C019-D1		1.3 U		
C019-2	LW2-C019-E2		1.5 U		
C020	LW2-C020-B	150 J	1.8 UT	440 J	590 JT
C020	LW2-C020-C	76 J	1.3 U	270 J	346 JT
C020	LW2-C020-D		4.2 U		
C022	LW2-C022-B	72 J	1.9 U	380 J	452 JT
C022	LW2-C022-C	190 J	1.9 U	580 J	770 JT
C022	LW2-C022-D		1.9 UT		
C025-1	LW2-C025-B1	14 U	1.4 U	57 U	57 UT
C025-1	LW2-C025-C1	14 U	1.6 U	71 J	71 JT
C025-1	LW2-C025-D1		1.5 U		
C025-2	LW2-C025-D2	12 U	1.3 UT	12 U	12 UT
C025-2	LW2-C025-E2		1.6 U		
C027	LW2-C027-B	24 J	3.7 U	110 J	134 JT
C027	LW2-C027-C	14 J	1.9 U	65 U	14 JT
C027	LW2-C027-D		1.6 U		
C034	LW2-C034-B	13 J	1.4 U	60 U	13 JT
C034	LW2-C034-C	22 J	1.4 U	69 U	22 JT
C034	LW2-C034-E	52 J	2.8 U	88 J	140 JT
C034	LW2-C034-F		1.5 U		
C038	LW2-C038-B	220 J	35 J	270 J	525 JT
C038	LW2-C038-C	27 J	1.3 U	52 U	27 JT
C038	LW2-C038-D	14 U	1.5 U	32 U	32 UT
C038	LW2-C038-E		1.3 U		
C060	LW2-C060-B	350 J	9.1 U	620 J	970 JT

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

Location	Chemical Name / Unit / Sample ID	Diesel-Range Hydrocarbons mg/kg	Gasoline-Range Hydrocarbons mg/kg	Residual-Range Hydrocarbons mg/kg	Total-Petroleum Hydrocarbons mg/kg
C060	LW2-C060-C	890 J	14 U	1400 J	2290 JT
C061	LW2-C061-B	39 JT	1.9 U	100 UT	39 JT
C061	LW2-C061-C	260 J	3.5 U	420 J	680 JT
C061	LW2-C061-E	13 U	1.4 U	15 U	15 UT
C062	LW2-C062-B	64 JT	1.3 U	150 JT	214 JT
C062	LW2-C062-C	24 J	1.4 U	71 J	95 JT
C062	LW2-C062-D	13 U	1.4 UT	9.2 U	9.2 UT
C064	LW2-C064-B	290 J	3.7 U	590 J	880 JT
C064	LW2-C064-C	14 U	1.6 U	65 J	65 JT
C064	LW2-C064-G		1.6 U		
C067	LW2-C067-B	120 J	1.8 U	320 J	440 JT
C067	LW2-C067-D	640 J	19 J	880 J	1540 JT
C067	LW2-C067-E	350 J	19 J	560 J	929 JT
C073	LW2-C073-B	16.5 JT	1.4 UT	57 JT	73.5 JT
C073	LW2-C073-C	130 J	5 UT	250 J	380 JT
C073	LW2-C073-D	285 JT	6.4 U	460 JT	745 JT
C074	LW2-C074-B	38 J	1.7 U	160 J	198 JT
C074	LW2-C074-C	19 J	1.9 UT	45 U	19 JT
C074	LW2-C074-D	22 J	2.2 U	63 J	85 JT
C074	LW2-C074-F	13 UT	1.4 UT	8.4 UT	8.4 UT
C086	LW2-C086-B	150 J	2.42 UT	530 J	680 JT
C086	LW2-C086-C	12 UT	1.6 U	7.3 UT	7.3 UT
C086	LW2-C086-D		1.2 U		
C093	LW2-C093-D		1.5 U		
C105	LW2-C105-B	69 J	1.6 U	180 J	249 JT
C105	LW2-C105-C	14 U	1.6 U	59 J	59 JT
C105	LW2-C105-F		1.4 U		
C111-1	LW2-C111-B	220 J	2.2 U	590 J	810 JT
C111-1	LW2-C111-C	240 J	7.3 J	490 J	737 JT
C111-1	LW2-C111-F	360 JT	6 U	590 JT	950 JT
C111-2	LW2-C111-B2	150 J	2 U	410 J	560 JT
C111-2	LW2-C111-C2	390 J	6.8 U	660 J	1050 JT
C111-2	LW2-C111-E2	950 J	32 J	1400 J	2380 JT
C121	LW2-C121-B	400 J	12 J	660 J	1070 JT
C121	LW2-C121-C	560 J	11 J	830 J	1400 JT
C121	LW2-C121-D		1.4 U		
C122	LW2-C122-B	420 J	5.8 U	780 J	1200 JT
C122	LW2-C122-C	720 J	19 J	1000 J	1740 JT
C130	LW2-C130-B	1100 J	31 J	1900 J	3030 JT
C130	LW2-C130-C	14 UT	1.3 UT	16 UT	16 UT
C130	LW2-C130-D		1.4 U		
C130	LW2-C130-E	14 U	1.5 U	20 U	20 UT
C130	LW2-C130-F		1.5 U		
C133	LW2-C133-B	270 J	2.4 U	930 J	1200 JT
C133	LW2-C133-D	890 J	8.9 UT	1700 J	2590 JT
C135	LW2-C135-B	120 J	2 U	560 J	680 JT
C135	LW2-C135-C	550 J	2.1 U	1600 J	2150 JT
C135	LW2-C135-D		7.4 U		
C136	LW2-C136-B	400 J	2.9 U	660 J	1060 JT
C136	LW2-C136-C	780 J	11 J	990 J	1780 JT
C136	LW2-C136-D	1200 J	26 J	1800 J	3030 JT
C138	LW2-C138-B		1.9 U		

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

Location	Sample ID	Diesel-Range Hydrocarbons mg/kg	Gasoline-Range Hydrocarbons mg/kg	Residual-Range Hydrocarbons mg/kg	Total-Petroleum Hydrocarbons mg/kg
C138	LW2-C138-C	12 UT	1.4 U	7.7 UT	7.7 UT
C138	LW2-C138-D		1.4 U		
C139	LW2-C139-B	85 J	2 U	340 J	425 JT
C139	LW2-C139-C	770 J	3.2 U	2000 J	2770 JT
C139	LW2-C139-D		2 U		
C142	LW2-C142-B	700 J	17 J	1000 J	1720 JT
C142	LW2-C142-C	1600 J	42 J	2000 J	3640 JT
C144	LW2-C144-B	220 J	2.6 U	730 J	950 JT
C144	LW2-C144-D	28 J	1.4 U	55 J	83 JT
C147	LW2-C147-B	570 J	15 J	850 J	1440 JT
C147	LW2-C147-C	560 J	35 J	830 J	1430 JT
C147	LW2-C147-E	1200 J	40 J	1700 J	2940 JT
C148	LW2-C148-B	59 J	1.8 U	240 J	299 JT
C148	LW2-C148-C	340 J	2.2 U	940 J	1280 JT
C148	LW2-C148-E		6.9 J		
C152	LW2-C152-B	360 J	4.2 U	900 J	1260 JT
C152	LW2-C152-C	340 J	5.4 U	700 J	1040 JT
C152	LW2-C152-E		1.4 UT		
C155	LW2-C155-B	220 J	5.5 U	480 J	700 JT
C155	LW2-C155-C	150 J	3.5 U	340 J	490 JT
C155	LW2-C155-D		1.8 U		
C156	LW2-C156-B	380 J	3.8 UT	920 J	1300 JT
C156	LW2-C156-C	440 J	6.7 U	690 J	1130 JT
C156	LW2-C156-F		1.3 U		
C157	LW2-C157-B	800 J	20 J	1400 J	2220 JT
C157	LW2-C157-C	470 J	6.4 U	950 J	1420 JT
C158	LW2-C158-B	260 J	3.2 U	620 J	880 JT
C158	LW2-C158-C	380 J	3.8 U	780 J	1160 JT
C158	LW2-C158-D	250 J	7 J	420 J	677 JT
C158	LW2-C158-E		2.4 U		
C160	LW2-C160-B	790 J	28 J	1300 J	2120 JT
C160	LW2-C160-C	280 J	5.6 U	610 J	890 JT
C161	LW2-C161-B	360 J	18 J	660 J	1040 JT
C161	LW2-C161-C	215 JT	4.7 U	470 JT	685 JT
C161	LW2-C161-D		1.5 U		
C162	LW2-C162-B	330 J	4 U	880 J	1210 JT
C162	LW2-C162-C	440 J	8.6 J	770 J	1220 JT
C162	LW2-C162-D		1.8 U		
C163-1	LW2-C163-B1	13 J	1.3 U	14 U	13 JT
C163-1	LW2-C163-C1	190 J	5.1 U	420 J	610 JT
C163-1	LW2-C163-D1		1.5 U		
C163-2	LW2-C163-B2	13 UT	1.3 UT	12 UT	13 UT
C163-2	LW2-C163-C2	185 JT	5.1 UT	355 JT	540 JT
C163-2	LW2-C163-D2		1.5 UT		
C164	LW2-C164-B	11 U	1.3 U	34 U	34 UT
C164	LW2-C164-C	12 UT	1.3 UT	9.1 UT	9.1 UT
C164	LW2-C164-E	820 J	21 J	1200 J	2040 JT
C166	LW2-C166-B	52 J	1.5 U	220 J	272 JT
C166	LW2-C166-C	800 J	23 J	1000 J	1820 JT
C166	LW2-C166-D	810 J	27 J	1000 J	1840 JT
C169	LW2-C169-B	270 J	3.6 UT	680 J	950 JT
C169	LW2-C169-C	450 J	8 U	660 J	1110 JT

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

Location	Chemical Name / Unit / Sample ID	Diesel-Range Hydrocarbons mg/kg	Gasoline-Range Hydrocarbons mg/kg	Residual-Range Hydrocarbons mg/kg	Total-Petroleum Hydrocarbons mg/kg
C169	LW2-C169-D		11 J		
C170	LW2-C170-B	185 JT	12 J	375 JT	572 JT
C170	LW2-C170-C	51 J	4.6 U	110 J	161 JT
C170	LW2-C170-D		2.4 U		
C171	LW2-C171-B	283 JT	6.3 U	631 JT	914 JT
C171	LW2-C171-C	210 J	15 J	390 J	615 JT
C171	LW2-C171-D		1.6 U		
C172	LW2-C172-B	78 J	2.4 U	310 J	388 JT
C172	LW2-C172-C	450 J	14 J	670 J	1130 JT
C172	LW2-C172-E		5.35 UT		
C173	LW2-C173-B	160 J	3.1 U	520 J	680 JT
C173	LW2-C173-C	390 J	8 U	710 J	1100 JT
C173	LW2-C173-E		2.4 U		
C176	LW2-C176-B	270 J	3.6 U	500 J	770 JT
C176	LW2-C176-C	44 J	1.6 U	110 U	44 JT
C176	LW2-C176-G	12 UT	1.4 U	14 UT	14 UT
C179	LW2-C179-B	1100 J	28 J	1300 J	2430 JT
C179	LW2-C179-C	640 J	19 J	980 J	1640 JT
C179	LW2-C179-D	575 JT	18 J	1000 JT	1590 JT
C182	LW2-C182-B	680 J	17 J	790 J	1490 JT
C182	LW2-C182-C	640 J	23 J	880 J	1540 JT
C182	LW2-C182-D		54 J		
C184	LW2-C184-B	750 J	13 J	970 J	1730 JT
C184	LW2-C184-C	1200 J	32 J	1100 J	2330 JT
C184	LW2-C184-D	82 J	4.8 U	180 J	262 JT
C184	LW2-C184-E		1.5 U		
C185	LW2-C185-B	530 J	18 J	700 J	1250 JT
C185	LW2-C185-C	640 J	12 J	890 J	1540 JT
C185	LW2-C185-D		3.8 U		
C192	LW2-C192-B	330 J	3.8 U	830 J	1160 JT
C192	LW2-C192-C	1200 J	13 U	1500 J	2700 JT
C192	LW2-C192-D	160 J	1.4 U	320 J	480 JT
C196	LW2-C196-B	290 J	1.4 U	420 J	710 JT
C196	LW2-C196-C	14 U	1.4 U	17 J	17 JT
C197	LW2-C197-B	530 J	11 J	980 J	1520 JT
C197	LW2-C197-C	1600 J	34 J	2200 J	3830 JT
C197	LW2-C197-D	13 UT	1.3 UT	9.6 JT	9.6 JT
C197	LW2-C197-E		1.4 U		
C199	LW2-C199-B	430 J	2.4 U	820 J	1250 JT
C199	LW2-C199-C	28 J	1.5 U	83 U	28 JT
C199	LW2-C199-E		1.4 U		
C202	LW2-C202-B	1900 J	24 J	2300 J	4220 JT
C202	LW2-C202-C	3200 J	20 J	3600 J	6820 JT
C202	LW2-C202-D		1.6 U		
C203	LW2-C203-B	490 J	2.4 U	1100 J	1590 JT
C203	LW2-C203-C	3400 J	23 J	4500 J	7920 JT
C203	LW2-C203-E	205 JT	2 U	245 JT	450 JT
C206	LW2-C206-B	1700 J	35 J	1700 J	3440 JT
C206	LW2-C206-C	11 U	1.3 U	11 U	11 UT
C206	LW2-C206-D		1.2 U		
C207-1	LW2-C207-B	3500 J	20 JT	3300 J	6820 JT
C207-1	LW2-C207-C	830 J	2.7 U	1100 J	1930 JT

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

Location	Sample ID	Diesel-Range Hydrocarbons mg/kg	Gasoline-Range Hydrocarbons mg/kg	Residual-Range Hydrocarbons mg/kg	Total-Petroleum Hydrocarbons mg/kg
C207-1	LW2-C207-D	990 J	4.6 U	1400 J	2390 JT
C207-2	LW2-C207-B2	2900 JT	16 JT	2950 JT	5870 JT
C207-2	LW2-C207-C2	665 JT	3.8 UT	1100 JT	1770 JT
C210	LW2-C210-B	11 U	1.5 U	7.4 U	7.4 UT
C210	LW2-C210-C	14 U	1.4 UT	9.1 U	9.1 UT
C210	LW2-C210-E		1.5 U		
C215	LW2-C215-B	13 UT	1.3 UT	9.25 JT	9.25 JT
C215	LW2-C215-C	12 U	1.3 U	7.7 U	7.7 UT
C220	LW2-C220-B	65 J	1.3 U	170 J	235 JT
C220	LW2-C220-C	48 JT	1.3 U	81.5 JT	130 JT
C221	LW2-C221-B	170 J	6.6 U	150 J	320 JT
C221	LW2-C221-C	1400 J	2.7 U	1900 J	3300 JT
C221	LW2-C221-D		1.8 U		
C228	LW2-C228-B	450 JT	10 J	715 JT	1180 JT
C231	LW2-C231-B	1800 J	76 J	1800 J	3680 JT
C231	LW2-C231-C	210 J	3.2 U	340 J	550 JT
C232	LW2-C232-B	11 U	1.3 UT	7 U	7 UT
C232	LW2-C232-C	13 U	1.4 U	7.9 U	7.9 UT
C240	LW2-C240-B	260 J	1.9 UJ	580 J	840 JT
C240	LW2-C240-D	2000 J	26 J	2300 J	4330 JT
C240	LW2-C240-E	440 J	10 U	880 J	1320 JT
C245	LW2-C245-B	1100 J	12 J	1400 J	2510 JT
C245	LW2-C245-C	68 J	2.2 U	150 U	68 JT
C245	LW2-C245-D	330 J	7.9 U	690 J	1020 JT
C245	LW2-C245-E	28 J	1.5 UT	99 U	28 JT
C245	LW2-C245-F		1.4 U		
C247	LW2-C247-B	14 U	1.5 U	9.1 U	9.1 UT
C247	LW2-C247-C	14 U	1.5 U	8.7 U	8.7 UT
C247	LW2-C247-D	14 U	1.5 U	8.8 U	8.8 UT
C247	LW2-C247-E		1.4 UT		
C252	LW2-C252-B	13.9 JT	18 J	27 UT	31.9 JT
C252	LW2-C252-C	120 J	2.5 UT	420 J	540 JT
C252	LW2-C252-D		9.2 U		
C258	LW2-C258-B	200 JT	1.6 UT	365 JT	565 JT
C258	LW2-C258-C	910 J	25 J	1000 J	1940 JT
C258	LW2-C258-D		1.5 U		
C260	LW2-C260-B	490 J	7.9 U	880 J	1370 JT
C260	LW2-C260-C	47 JT	3.8 U	99.5 JT	147 JT
C260	LW2-C260-D		1.4 UT		
C263	LW2-C263-B	1700 J	54 J	1800 J	3550 JT
C263	LW2-C263-C		100 J		
C263	LW2-C263-D	3300 J	87 JT	3000 J	6390 JT
C264	LW2-C264-B	4800 J	170 J	5500 J	10500 JT
C264	LW2-C264-C	1300 J	7.8 U	3200 J	4500 JT
C264	LW2-C264-D		3 U		
C269	LW2-C269-B	860 J	27 J	1400 J	2290 JT
C269	LW2-C269-C	1500 J	66 J	1400 J	2970 JT
C269	LW2-C269-F	1700 J	57 J	2100 J	3860 JT
C270	LW2-C270-B	3000 J	44 J	3900 J	6940 JT
C270	LW2-C270-C	2000 J	57 J	2400 J	4460 JT
C272	LW2-C272-B	14 UT	2 U	8.7 UT	8.7 UT
C272	LW2-C272-C	13 U	1.3 U	8 U	8 UT

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

	Chemical Name Unit	Diesel-Range Hydrocarbons mg/kg	Gasoline-Range Hydrocarbons mg/kg	Residual-Range Hydrocarbons mg/kg	Total-Petroleum Hydrocarbons mg/kg
Location	**Sample ID**				
C273	LW2-C273-B	4400 J	87 J	6000 J	10500 JT
C273	LW2-C273-C	4900 J	30 J	6000 J	10900 JT
C273	LW2-C273-D		4.5 U		
C276	LW2-C276-B	1500 J	49 J	1700 J	3250 JT
C276	LW2-C276-C	29000 J	2400 J	15000 J	46400 JT
C276	LW2-C276-D		6 U		
C277	LW2-C277-B	300 J	4.5 U	790 J	1090 JT
C277	LW2-C277-C	930 J	32 J	1000 J	1960 JT
C277	LW2-C277-D	1300 J	63 J	1500 J	2860 JT
C278	LW2-C278-B	2850 JT	250 J	3250 JT	6350 JT
C278	LW2-C278-C	5200 J	320 J	3500 J	9020 JT
C278	LW2-C278-D	9.6 U	1.5 T	17 J	18.5 JT
C283	LW2-C283-B	4800 J	850 J	2500 J	8150 JT
C283	LW2-C283-C	4200 J	720 J	3700 J	8620 JT
C283	LW2-C283-E	14 UT	4.3 U	13.5 JT	13.5 JT
C284	LW2-C284-B	3100 J	700 J	2300 J	6100 JT
C284	LW2-C284-C	38000 J	5100 J	20000 J	63100 JT
C284	LW2-C284-D	140 J	90 J	110 J	340 JT
C284	LW2-C284-E		2.9 U		
C288	LW2-C288-B	5000 J	160 J	5700 J	10900 JT
C288	LW2-C288-C	3800 J	40 J	4900 J	8740 JT
C288	LW2-C288-D	1900 J	25 J	2900 J	4830 JT
C289	LW2-C289-B	7100 J	47 J	5100 J	12200 JT
C289	LW2-C289-C	4600 J	190 J	3800 J	8590 JT
C289	LW2-C289-E	9.4 U	1.4 U	14 J	14 JT
C291	LW2-C291-B	270 J	4.6 U	910 J	1180 JT
C291	LW2-C291-C	540 J	11 U	980 J	1520 JT
C293-1	LW2-C293-B	1600 J	110 J	1300 J	3010 JT
C293-1	LW2-C293-C	1600 J	95 J	1900 J	3600 JT
C293-1	LW2-C293-D	450 J	10 U	940 J	1390 JT
C293-2	LW2-C293-B2	1600 J	75 J	1600 J	3280 JT
C293-2	LW2-C293-C2	565 JT	10 UT	1350 JT	1920 JT
C293-2	LW2-C293-D2		2.5 U		
C294	LW2-C294-B	30000 J	2200 J	17000 J	49200 JT
C294	LW2-C294-C	2850 JT	59 J	3400 JT	6310 JT
C294	LW2-C294-D	270 J	9.8 U	530 J	800 JT
C299	LW2-C299-B	5200 J	670 J	2700 J	8570 JT
C299	LW2-C299-C	8400 J	76 J	3300 J	11800 JT
C3002	LW2-C300-B	250 J	5.6 U	640 J	890 JT
C3002	LW2-C300-C	300 J	7.3 U	670 J	970 JT
C3002	LW2-C300-D	110 J	2.2 UT	160 J	270 JT
C301	LW2-C301-B	30000 J	4200 J	14000 J	48200 JT
C301	LW2-C301-C	190000 J	21000 J	110000 J	321000 JT
C301	LW2-C301-D	30000 J	5300 J	14000 J	49300 JT
C301	LW2-C301-E	89000 J	17000 J	68000 J	174000 JT
C301	LW2-C301-G	3700 J	1400 J	2400 J	7500 JT
C302	LW2-C302-B	5000 J	260 J	3500 J	8760 JT
C302	LW2-C302-C	130000 J	7900 J	44000 J	182000 JT
C302	LW2-C302-D		1800 J		
C305-1	LW2-C305-B1	3900 J	110 J	2900 J	6910 JT
C305-1	LW2-C305-C1	210 J	6.4 U	230 J	440 JT
C305-1	LW2-C305-D1	110 J	1.4 U	140 J	250 JT

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

Location	Sample ID (Chemical Name / Unit)	Diesel-Range Hydrocarbons mg/kg	Gasoline-Range Hydrocarbons mg/kg	Residual-Range Hydrocarbons mg/kg	Total-Petroleum Hydrocarbons mg/kg
C305-2	LW2-C305-B2	8700 J	520 J	5000 J	14200 JT
C305-2	LW2-C305-C2	5400 J	230 J	3600 J	9230 JT
C305-2	LW2-C305-D2	38 J	1.3 UT	55 J	93 JT
C311	LW2-C311-B	2600 J	32 J	2300 J	4930 JT
C311	LW2-C311-C	870 J	24 J	1300 J	2190 JT
C311	LW2-C311-E	365 JT	11 J	715 JT	1090 JT
C313	LW2-C313-B	14 U	3.2 U	21 U	3.2 UT
C313	LW2-C313-C	16 J	1.6 U	32 U	16 JT
C314	LW2-C314-B	520 J	6.6 U	1200 J	1720 JT
C314	LW2-C314-C	290 J	25 J	870 J	1190 JT
C314	LW2-C314-D		4 U		
C316	LW2-C316-B	2300 J	12 UJT	750 J	3050 JT
C316	LW2-C316-C	1400 J	19 J	1400 J	2820 JT
C316	LW2-C316-D	4600 J	45 J	4000 J	8650 JT
C323	LW2-C323-B	280 J	5.1 UT	890 J	1170 JT
C323	LW2-C323-C	170 J	9.8 J	340 J	520 JT
C323	LW2-C323-D	79.5 JT	4.9 U	150 JT	230 JT
C323	LW2-C323-E		9.7 J		
C335	LW2-C335-B		13 U		
C342	LW2-C342-B	270 J	4.2 U	720 J	990 JT
C342	LW2-C342-C	540 J	8.2 U	900 J	1440 JT
C342	LW2-C342-D	75.5 JT	1.7 U	210 JT	286 JT
C342	LW2-C342-E		1.8 U		
C346	LW2-C346-B	550 J	12 U	830 J	1380 JT
C346	LW2-C346-C	220 J	5.1 U	470 J	690 JT
C346	LW2-C346-D		1.3 UT		
C347	LW2-C347-B	160 J	2.1 U	570 J	730 JT
C347	LW2-C347-C	2700 J	38.5 JT	1800 J	4540 JT
C347	LW2-C347-F	14 U	2 U	17 J	17 JT
C351	LW2-C351-B	650 J	24 J	1200 J	1870 JT
C351	LW2-C351-C	13 U	1.4 UT	11 J	11 JT
C351	LW2-C351-D	12 U	1.4 U	7.4 U	7.4 UT
C351	LW2-C351-E	11 U	1.4 U	7.1 U	7.1 UT
C352	LW2-C352-B	130 J	1.9 U	430 J	560 JT
C352	LW2-C352-C	110 J	2.1 U	390 J	500 JT
C352	LW2-C352-D	9.9 JT	1.2 U	24 JT	33.9 JT
C371	LW2-C371-B	620 J	18 J	980 J	1620 JT
C371	LW2-C371-C	140 J	2.1 UT	170 J	310 JT
C371	LW2-C371-E	89 J	1.7 U	170 J	259 JT
C372	LW2-C372-B	440 J	20 J	690 J	1150 JT
C372	LW2-C372-C	150 J	8.6 U	310 J	460 JT
C372	LW2-C372-E		33 J		
C377	LW2-C377-B	120 J	2 U	400 J	520 JT
C377	LW2-C377-C	1200 J	7.8 U	2000 J	3200 JT
C377	LW2-C377-E	4500 J	120 J	3100 J	7720 JT
C382	LW2-C382-B	520 J	28 J	840 J	1390 JT
C382	LW2-C382-C	14 U	2.1 U	58 U	58 UT
C382	LW2-C382-D		1.4 U		
C383	LW2-C383-B	120 J	79 J	450 J	649 JT
C383	LW2-C383-C	11 U	3.2 U	67 J	67 JT
C383	LW2-C383-D		1.5 U		
C384	LW2-C384-B	880 J	22 JT	1600 J	2500 JT

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

Location	Sample ID	Diesel-Range Hydrocarbons mg/kg	Gasoline-Range Hydrocarbons mg/kg	Residual-Range Hydrocarbons mg/kg	Total-Petroleum Hydrocarbons mg/kg
	Chemical Name / Unit				
C384	LW2-C384-C	21 J	1.4 U	41 J	62 JT
C384	LW2-C384-F		1.9 U		
C392	LW2-C392-B	210 J	6.2 UT	570 J	780 JT
C392	LW2-C392-C	94.5 JT	3.1 U	200 JT	295 JT
C392	LW2-C392-D		1.3 U		
C397	LW2-C397-B	490 J	8 U	1200 J	1690 JT
C397	LW2-C397-C	555 JT	8.1 UJ	1200 JT	1760 JT
C397	LW2-C397-D	760 J	33 J	1600 J	2390 JT
C401	LW2-C401-B	810 J	7.9 U	800 J	1610 JT
C401	LW2-C401-C	1900 J	36 J	610 J	2550 JT
C401	LW2-C401-D	1100 J	50 J	1300 J	2450 JT
C401	LW2-C401-E	1900 J	91 J	1500 J	3490 JT
C401	LW2-C401-F		1.5 U		
C402	LW2-C402-B	180 J	2.6 U	360 J	540 JT
C402	LW2-C402-C	13 JT	1.4 U	29 JT	42 JT
C402	LW2-C402-D		1.4 U		
C403	LW2-C403-B	100 J	13 J	130 J	243 JT
C403	LW2-C403-C	20 T	1.3 U	27 T	47 T
C403	LW2-C403-D	13 U	1.8 U	29 J	29 JT
C403	LW2-C403-F		1.7 U		
C405	LW2-C405-B	210 JT	7.7 U	570 JT	780 JT
C405	LW2-C405-C	510 J	5.5 U	1200 J	1710 JT
C405	LW2-C405-E		1.5 UT		
C420	LW2-C420-B	290 J	6 U	700 J	990 JT
C420	LW2-C420-C	160 J	2.3 U	450 J	610 JT
C420	LW2-C420-D		1.3 UT		
C425-1	LW2-C425-B1	150 JT	4.7 UT	430 JT	580 JT
C425-1	LW2-C425-C1	175 JT	4.5 UT	415 JT	590 JT
C425-1	LW2-C425-E1	255 JT	4.4 UT	545 JT	800 JT
C425-1	LW2-C425-F1		1.6 UT		
C425-2	LW2-C425-B2	240 J	3.2 U	750 J	990 JT
C425-2	LW2-C425-C2	110 J	4.2 U	260 J	370 JT
C425-2	LW2-C425-D2	360 J	11 U	790 J	1150 JT
C426	LW2-C426-B	330 J	11 U	840 J	1170 JT
C426	LW2-C426-C	11 UT	1.3 UT	11 UT	11 UT
C426	LW2-C426-D		1.5 U		
C430	LW2-C430-B	204 JT	2.6 U	562 JT	766 JT
C430	LW2-C430-C	430 J	8.6 J	900 J	1340 JT
C430	LW2-C430-E	510 J	13 J	1200 J	1720 JT
C437	LW2-C437-B	57 J	4.6 U	130 J	187 JT
C437	LW2-C437-C	13 UT	1.4 UT	8.1 UT	8.1 UT
C437	LW2-C437-D	13 U	1.4 U	7.9 U	7.9 UT
C437	LW2-C437-F		1.5 U		
C445	LW2-C445-B	120 J	3.4 U	370 J	490 JT
C445	LW2-C445-C	270 J	11 U	550 J	820 JT
C445	LW2-C445-E	460 J	40 J	980 J	1480 JT
C447	LW2-C447-B	340 JT	8.7 U	740 JT	1080 JT
C447	LW2-C447-C	120 J	2.8 U	320 J	440 JT
C447	LW2-C447-D	14 U	1.4 U	68 J	68 JT
C447	LW2-C447-F		1.4 U		
C448	LW2-C448-B	68 J	2 U	290 J	358 JT
C448	LW2-C448-C	340 J	2.9 U	1100 J	1440 JT

Table 4-11. Petroleum Hydrocarbon Concentrations Used in TPH Calculations for Surface and Subsurface Sediment Samples.

Location	Chemical Name / Unit / Sample ID	Diesel-Range Hydrocarbons mg/kg	Gasoline-Range Hydrocarbons mg/kg	Residual-Range Hydrocarbons mg/kg	Total-Petroleum Hydrocarbons mg/kg
C448	LW2-C448-D		9.3 J		
C450	LW2-C450-B	110 J	2.5 U	410 J	520 JT
C450	LW2-C450-C	1200 J	19 J	2700 J	3920 JT
C453	LW2-C453-B	2700 J	54 J	5000 J	7750 JT
C453	LW2-C453-C	1900 J	56 J	3200 J	5160 JT
C453	LW2-C453-D	280 J	19 J	720 J	1020 JT
C454	LW2-C454-B	93.1 JT	13 J	220 UT	106 JT
C454	LW2-C454-C	510 J	27 J	1200 J	1740 JT
C454	LW2-C454-D	190 J	5.9 U	510 J	700 JT
C454	LW2-C454-E	17 J	1.4 UT	66 U	17 JT
C454	LW2-C454-H		5.1 U		
C455	LW2-C455-B	12000 J	140 J	25000 J	37100 JT
C455	LW2-C455-C	2000 J	42 J	3500 J	5540 JT
C455	LW2-C455-D	420 J	19 J	890 J	1330 JT
C455	LW2-C455-F		9.7 U		
C474	LW2-C474-B	65 J	2 UT	350 J	415 JT
C474	LW2-C474-C	51 J	1.8 U	240 J	291 JT
C474	LW2-C474-D		1.9 U		
C477	LW2-C477-B	63 J	1.9 U	300 J	363 JT
C477	LW2-C477-C	130 J	2.7 U	330 J	460 JT
C521	LW2-C521-B	3400 J	110 J	2000 J	5510 JT
C521	LW2-C521-C	23000 J	3400 J	11000 J	37400 JT
C521	LW2-C521-E	40 J	1.4 U	34 J	74 JT

Notes:

J The associated numerical value is an estimated quantity.

T The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

U The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Table 4-12. Dioxin, Furan, and PCB Concentrations Used in 2, 3, 7, 8 – TCDD TEQ Value Calculations for Beach, Surface, and Subsurface Sediment Samples.

CAS No / Chemical Name / Unit		1746-01-6 2,3,7,8-Tetrachlorodibenzo-p-dioxin pg/g	40321-76-4 1,2,3,7,8-Pentachlorodibenzo-p-dioxin pg/g	39227-28-6 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin pg/g	19408-74-3 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin pg/g	35822-46-9 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin pg/g	3268-87-9 Octachlorodibenzo-p-dioxin pg/g	57653-85-7 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin pg/g	51207-31-9 2,3,7,8-Tetrachlorodibenzofuran pg/g	57117-41-6 1,2,3,7,8-Pentachlorodibenzofuran pg/g	57117-31-4 2,3,4,7,8-Pentachlorodibenzofuran pg/g	70648-26-9 1,2,3,4,7,8-Hexachlorodibenzofuran pg/g	57117-44-9 1,2,3,6,7,8-Hexachlorodibenzofuran pg/g	72918-21-9 1,2,3,7,8,9-Hexachlorodibenzofuran pg/g	60851-34-5 2,3,4,6,7,8-Hexachlorodibenzofuran pg/g	67562-39-4 1,2,3,4,6,7,8-Heptachlorodibenzofuran pg/g
Location	**Sample ID**															
Beach Sediment Samples																
B001	LW2-B001	0.025 U	0.028 U	0.041 U	0.057 U	1.857	11.545	0.074 J	0.019 U	0.021 U	0.023 U	0.027 U	0.029 U	0.035 U	0.03 U	0.197 U
B002	LW2-B002	0.017 U	0.018 U	0.029 U	0.097 U	3.827	32.152	0.138 J	0.232	0.051 U	0.14 J	0.136 J	0.053 J	0.02 U	0.055 J	0.481 U
B003	LW2-B003	0.026 U	0.028 U	0.032 U	0.034 U	4.074	31.265	0.104 J	0.022 U	0.023 U	0.025 U	0.022 U	0.023 U	0.025 U	0.022 U	0.315 U
B004	LW2-B004	0.016 U	0.077 J	0.081 U	0.288 J	12.25	107.491	0.511 J	1.262	0.374 J	1.102	0.81 J	0.294 J	0.021 U	0.409 J	1.937
B005	LW2-B005	0.021 U	0.027 U	0.034 U	0.09 U	3.68	32.833	0.125 J	0.101 U	0.039 U	0.037 U	0.119 J	0.063 J	0.02 U	0.05 J	0.544 J
B006	LW2-B006	0.018 U	0.043 J	0.045 U	0.181 J	5.141	38.395	0.235 J	0.087 U	0.014 U	0.037 J	0.074 J	0.024 U	0.026 U	0.043 J	0.705 J
B007	LW2-B007	0.031 UT	0.037 JT	0.036 UT	0.101 JT	3.0585 T	23.7775 T	0.131 JT	0.1825 T	0.079 JT	0.085 JT	0.216 JT	0.087 JT	0.028 UT	0.024 UT	0.4055 JT
B008	LW2-B008	0.019 U	0.077 J	0.163 J	0.474 J	16.677	125.521	0.584 J	0.127 J	0.058 U	0.093 J	0.204 J	0.137 J	0.032 U	0.188 J	2.465
B009	LW2-B009	0.017 U	0.024 U	0.033 U	0.448 J	134.045	954.539 J	7.031	0.411	1.841	11.745	49.474	7.479	0.095 U	8.593	62.588
B010	LW2-B010	0.063 U	0.769 J	3.14	13.44	326.429 J	2758.606 J	8.572	0.208	0.553 J	2.385	9.683	1.698	0.134 U	2.42	53.38
B011	LW2-B011	0.011 U	0.015 U	0.026 J	0.094 U	3.109	23.422	0.13 J	0.011 U	0.014 U	0.014 U	0.079 J	0.028 J	0.022 U	0.035 U	0.396 J
B012	LW2-B012	0.036 U	0.104 J	0.166 J	0.506	40.369	275.859	1.787	5.366	14.839	6.12	14.086	3.774	0.196 J	1.646	9.077
B015	LW2-B015	0.012 U	0.077 J	0.113 U	0.435 J	14.927	131.195	0.738	0.079 J	0.052 U	0.08 J	0.302 J	0.112 J	0.019 U	0.165 J	2.022
B016	LW2-B016	0.045 JT	0.3195 JT	0.031 UT	2.4495 JT	216.1575 T	1420.139 JT	4.999 T	2.452 T	2.7475 T	1.3275 T	3.853 JT	1.1365 T	0.467 JT	0.743 JT	11.461 T
B017	LW2-B017	0.024 U	0.08 J	0.099 J	0.297 J	11.931	71.247	0.702 J	0.074 U	0.086 J	0.107 J	0.194 U	0.105 J	0.03 U	0.152 J	1.294
B018	LW2-B018	0.484	0.41 J	0.507 U	1.509	25.755	123.631	2.112	153.626	146.45	54.222	174.865	48.45	2.549	10.781	55.686
B019	LW2-B019	0.04 J	0.197 J	0.376 J	0.777 J	20.801	134.149	1.129	0.108 J	0.152 J	0.141 U	0.706 J	0.417 J	0.035 U	0.508 J	7.359
B020	LW2-B020	0.022 U	0.083 U	0.169 U	0.547 J	23.951	272.44	0.819 J	0.053 U	0.082 J	0.157 J	0.638 J	0.646 J	0.039 U	0.376 J	6.042
B021	LW2-B021	0.056 U	0.125 J	0.137 J	0.534 J	14.931	144.695	0.849	2.8	1.041	1.858	1.374	0.662 J	0.033 U	0.866	3.941
B022-1	LW2-B022-1	0.099 J	0.531 J	0.98	2.857	140.589	1055.291 J	6.86	0.842	0.524 J	0.931	2.498	1.519	0.576 J	2.507	26.806
B022-2	LW2-B022-2	0.037 U	0.214 J	0.319 J	0.826 J	30.858	264.025	1.727	0.307	0.204 J	0.349 J	0.796 J	0.404 J	0.043 U	0.607 J	5.515
B023	LW2-B023	0.02 U	0.075 U	0.134 U	0.454 J	17.705	142.29	0.863	0.135 U	0.057 U	0.15 U	0.475 J	0.222 J	0.039 U	0.337 J	3.321
B024	LW2-B024	1.291	0.666 J	1.023	3.772	154.258	1659.661 J	5.697	0.636	0.341 U	0.663 J	1.55	1.569	0.063 U	1.421	26.99
B025-1	LW2-B025-1	0.091 UT	0.141 JT	0.225 JT	0.8695 T	30.6425 T	247.821 T	1.2035 T	0.556 T	0.3235 JT	0.633 T	1.002 T	0.4595 JT	0.023 UT	0.6085 JT	5.23 JT
B025-2	LW2-B025-2	0.118 U	0.097 J	0.183 J	0.681 J	31.972	253.648	0.95	0.399	0.205 J	0.411 J	0.587 J	0.318 J	0.017 U	0.417 J	5.996
B026	LW2-B026	0.048 U	0.124 J	0.177 J	0.604 J	26.153	384.689	1.083	0.175 J	0.099 J	0.215 J	0.653 J	0.302 J	0.02 U	0.497 J	5.118

Table 4-12. Dioxin, Furan, and PCB Concentrations Used in 2, 3, 7, 8 – TCDD TEQ Value Calculations for Beach, Surface, and Subsurface Sediment Samples.

CAS No Chemical Name Unit		55673-89-7 1,2,3,4,7,8,9-Heptachlorodibenzofuran pg/g	39001-02-0 Octachlorodibenzofuran pg/g	32598-13-3 3,3',4,4'-Tetrachlorobiphenyl pg/g	70362-50-4 3,4,4',5-Tetrachlorobiphenyl pg/g	57465-28-8 3,3',4,4',5-Pentachlorobiphenyl pg/g	32774-16-6 3,3',4,4',5,5'-Hexachlorobiphenyl pg/g	74472-37-0 2,3,4,4',5-Pentachlorobiphenyl pg/g	PCB106_118 PCB106 & 118 pg/g	65510-44-3 2,3',4,4',5'-Pentachlorobiphenyl pg/g	38380-08-4 2,3,3',4,4',5-Hexachlorobiphenyl pg/g	69782-90-7 2,3,3',4,4',5'-Hexachlorobiphenyl pg/g	52663-72-6 2,3',4,4',5,5'-Hexachlorobiphenyl pg/g	39635-31-9 2,3,3',4,4',5,5'-Heptachlorobiphenyl pg/g	32598-14-4 2,3,3',4,4'-Pentachlorobiphenyl pg/g	2,3,7,8-TCDD TEQ pg/g
Location	**Sample ID**															
Beach Sediment Samples																
B001	LW2-B001	0.056 U	0.798 J													0.0272 JT
B002	LW2-B002	0.054 U	1.664	866	105	33.9	0.347	167	4840	150	344	82.3	122	17.9	2730	4.74 JT
B003	LW2-B003	0.052 U	1.922													0.0545 JT
B004	LW2-B004	0.177 J	4.069	8080	1130	272	2.21	1970	56000	1500	3370	751	1150	241	31900	41.3 JT
B005	LW2-B005	0.049 U	1.501 J													0.0814 JT
B006	LW2-B006	0.054 U	1.501 J													0.177 JT
B007	LW2-B007	0.059 UT	1.0915 JT	6.04	0.947	0.923	0.206	1.89	78.4	1.45	14.6	2.83	6.66	2.81	33	0.309 JT
B008	LW2-B008	0.195 J	5.453	3.78	1.39	1.07	0.151	2.22	97.7	1.87	21.8	4.91	12.6	4.82	44.6	0.656 JT
B009	LW2-B009	7.34	126.442													15.5 JT
B010	LW2-B010	3.136	285.206													10 JT
B011	LW2-B011	0.051 U	1.013 J													0.0638 JT
B012	LW2-B012	1.36	19.894													7.2 JT
B015	LW2-B015	0.104 J	7.304	1.85	0.352	0.237	0.151 U	0.444	16.9	0.381	2.21	0.708	1.15	0.371	7.84	0.513 JT
B016	LW2-B016	0.9425 JT	65.647 T													5.21 JT
B017	LW2-B017	0.089 U	1.925	3.35	0.769	0.551 U	0.214 U	1.22	54.7	0.728	8.32	1.97	4.93	1.94	21.5	0.427 JT
B018	LW2-B018	21.959	59.187	188	28.8	7.33	0.75 U	42.1	1180	32.9	131	20.5	59.1	31.4	693	76.8 JT
B019	LW2-B019	0.406 J	18.69													0.948 JT
B020	LW2-B020	0.313 J	16.749	15.5	4.15	2.44	0.395	6.94	351	4.77	58	11.3	28.3	13.7	133	1.06 JT
B021	LW2-B021	0.311 J	7.825													2.04 JT
B022-1	LW2-B022-1	1.499	61.428	140	35.7	18	1.2	51.4	2720	55.5	422	100	197	67.2	1110	7.3 JT
B022-2	LW2-B022-2	0.367 J	9.621	139	39.8	18.2	1.02 U	40.3	2870	55.2	588	119	264	99.5	1140	3.92 JT
B023	LW2-B023	0.178 U	6.899	7.78	1.43	1.85	0.594 U	2.6	115	2.16	41.1	9.48	35.7	23.1	61.9	0.693 JT
B024	LW2-B024	0.837 J	128.235	271	49.2	17.2	0.919 U	77.2	2830	72.8	333	81.9	161	41.5	1250	8.27 JT
B025-1	LW2-B025-1	0.387 JT	17.4495 T													1.36 JT
B025-2	LW2-B025-2	0.348 J	23.52													1.08 JT
B026	LW2-B026	0.417 J	27.874	199	37.9	31.8	4.34	72.5	3600	39.9	867	128	460	283	1290	5.25 JT

Table 4-12. Dioxin, Furan, and PCB Concentrations Used in 2, 3, 7, 8 – TCDD TEQ Value Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	1746-01-6 2,3,7,8-Tetrachlorodibenzo-p-dioxin pg/g	40321-76-4 1,2,3,7,8-Pentachlorodibenzo-p-dioxin pg/g	39227-28-6 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin pg/g	19408-74-3 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin pg/g	35822-46-9 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin pg/g	3268-87-9 Octachlorodibenzo-p-dioxin pg/g	57653-85-7 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin pg/g	51207-31-9 2,3,7,8-Tetrachlorodibenzofuran pg/g	57117-41-6 1,2,3,7,8-Pentachlorodibenzofuran pg/g	57117-31-4 2,3,4,7,8-Pentachlorodibenzofuran pg/g	70648-26-9 1,2,3,4,7,8-Hexachlorodibenzofuran pg/g	57117-44-9 1,2,3,6,7,8-Hexachlorodibenzofuran pg/g	72918-21-9 1,2,3,7,8,9-Hexachlorodibenzofuran pg/g	60851-34-5 2,3,4,6,7,8-Hexachlorodibenzofuran pg/g	67562-39-4 1,2,3,4,6,7,8-Heptachlorodibenzofuran pg/g
Location	**Sample ID**															
Surface Interval Sediment Samples																
D1-1	LW2-D1-1	0.012 UT	0.02 JT	0.027 JT	0.08 JT	2.339 UT	17.755 UT	0.146 JT	0.08 UT	0.036 JT	0.029 JT	0.081 JT	0.036 JT	0.009 UT	0.009 UT	0.457 UT
D1-2	LW2-D1-2	0.011 U	0.025 U	0.054 J	0.182 J	6.873 U	59.537 U	0.342 J	0.168 J	0.006 U	0.007 U	0.165 J	0.078 J	0.048 U	0.048 U	1.363 U
D2	LW2-D2	0.008 U	0.008 U	0.035 J	0.14 J	6.896 U	49.446 U	0.252 J	0.058 J	0.036 J	0.026 J	0.084 U	0.042 J	0.006 U	0.007 U	0.783 U
G020	LW2-G020	0.032 U	0.082 U	0.054 U	0.589 J	30.843	268.772	1.05 J	0.675	0.337 J	0.454 J	0.685 J	0.247 J	0.017 U	0.298 J	3.72
G038	LW2-G038	0.026 U	0.114 J	0.172 J	0.462 J	25.84	217.666	0.992	1.556	0.4 J	0.469 J	0.464 J	0.241 J	0.11 U	0.264 J	3.039
G060	LW2-G060	0.021 U	0.038 J	0.045 J	0.191 J	9.335	86.705	0.316 J	0.204	0.14 J	0.073 U	0.243 J	0.105 J	0.026 U	0.111 J	0.978
G061	LW2-G061	0.037 U	0.428 J	1.454 U	11.458	246.964	1230.736 J	8.947	0.694	0.44 J	0.563 J	0.813 J	0.294 J	0.162 J	0.301 J	7.537
G062	LW2-G062	0.168 J	1.069	1.877 U	6.051	247.172	2250.706 J	9.913	0.339	0.559 J	0.565 J	2.434	1.816	0.426 J	2.628	37.058
G064	LW2-G064	0.021 UT	0.047 JT	0.038 JT	0.234 JT	16.469 JT	110.868 JT	0.39 JT	0.238 T	0.14 JT	0.108 JT	0.243 JT	0.089 JT	0.013 UT	0.09 JT	1.155 JT
G066	LW2-G066	0.049 U	0.026 U	0.045 J	0.141 J	7.868	78.895	0.271 J	0.178 J	0.147 J	0.062 U	0.233 J	0.098 J	0.023 U	0.081 J	0.765 J
G077	LW2-G077	0.026 U	0.044 U	0.067 U	0.07 U	5.852	50.236	0.188 J	0.16 J	0.137 J	0.074 U	0.283 U	0.121 J	0.041 U	0.043 J	0.86 J
G086	LW2-G086	0.027 U	0.028 U	0.16 J	0.34 J	15.252	118.442	0.639 J	0.303 U	0.148 J	0.142 J	0.443 J	0.188 J	0.046 U	0.185 U	3.079
G105	LW2-G105	0.109 J	0.178 J	0.316 U	0.96 J	37.861	279.545	1.97	0.833	0.676 J	0.4 J	1.036 J	0.823 J	0.089 U	0.527 J	7.457
G111	LW2-G111	0.048 U	0.123 U	0.094 U	0.6 J	27.349	252.468	1.245	0.385 U	0.181 U	0.282 J	0.751 J	0.352 J	0.048 U	0.415 J	4.759
G127	LW2-G127	0.141 U	0.193 U	0.179 U	0.591 J	20.161	173.111	1.029 J	0.559 U	0.497 J	0.16 U	1.322 J	1.382 J	0.18 U	0.183 U	5.364 J
G133	LW2-G133	0.048 UT	0.057 UT	0.084 UT	0.417 JT	59.741 JT	423.094 T	1.84 JT	1.849 JT	0.725 JT	1.944 JT	6.644 JT	6.73 JT	0.082 UT	0.234 JT	8.086 JT
G163	LW2-G163	0.006 U	0.011 U	0.007 U	0.006 U	0.734 U	5.93 U	0.007 U	0.07 U	0.009 U	0.01 U	0.043 J	0.021 J	0.012 U	0.012 U	0.163 J
G185	LW2-G185	0.093 U	0.314 J	0.663 U	3.498	157.883	1305.818	6.312	2.855	5.435	2.062 J	5.728	1.735 J	0.348 U	1.248 J	10.56
G192	LW2-G192	0.015 U	0.173 J	0.258 J	0.723 J	65.743	613.049	3.059	8.105	19.94	8.845	35.774	12.893	4.107	2.698	38.932
G207	LW2-G207	0.023 U	0.238 J	1.126	3.026	76.183	386.587	2.54	0.257	0.289 J	0.202 J	0.652 J	0.408 J	0.046 U	0.194 J	6.722
G210	LW2-G210	0.028 U	0.104 J	0.035 U	0.223 J	60.8	634.117	1.415	0.152 U	0.017 U	0.237 J	0.479 U	0.586 J	0.064 U	0.388 J	0.061 U
G245	LW2-G245	0.082 U	0.137 U	0.362 U	0.371 U	18.522	147.439	1.216 U	0.69 U	0.925 J	0.38 J	1.844	2.119	0.213 U	0.291 U	3.149
G247	LW2-G247	0.009 U	0.405 U	0.543 U	1.194	138.215	888.143	8.283	0.704	0.298 J	0.796 U	1.433	1.717	0.524 J	1.716	51.078
G260	LW2-G260	0.008 UT	0.246 JT	0.237 JT	0.778 JT	43.71 JT	272.882 JT	2.417 JT	0.624 T	0.946 JT	2.216 JT	1.045 T	0.429 JT	0.289 JT	0.418 JT	10.631 JT
G307	LW2-G307	0.346	1.066 J	9.384	16.945	122.343	774.325	3.882	0.465	0.151 U	0.227 U	0.848 J	0.728 J	0.09 U	0.675 J	9.424
G313	LW2-G313	0.376	0.54 J	0.856 J	3.085	125.251	1616.044	5.895	1.392	1.397	1.04 J	3.69	3.376	0.135 J	1.914	29.317
G314	LW2-G314	0.158 U	0.23 U	0.3 U	1.22 J	40.97	374.45	2.088	6.514	6.935	3.396	11.827	3.094	0.149 U	1.113 J	12.274
G315	LW2-G315	0.354	0.018 U	0.074 U	0.308 J	17.5	199.545	1.064 J	13.793	12.39	8.782	14.966	3.936	0.034 U	1.14	9.498
G316	LW2-G316	0.012 U	0.022 U	0.015 U	0.015 U	5.616	34.065	0.243 J	0.508	0.303 J	0.028 U	0.482 J	0.111 U	0.016 U	0.016 U	0.638 J
G317	LW2-G317	0.017 U	0.023 U	0.031 U	0.073 J	3.341	29.565	0.156 J	0.319	0.225 J	0.136 J	0.388 J	0.112 J	0.04 U	0.067 J	0.934 J
G321	LW2-G321	0.247	0.281 U	0.369 U	1.18	59.686	744.018	2.745	0.194 U	10.957	5.154	22.116	6.631	0.176 U	2.119	25.459
G323	LW2-G323	0.025 U	0.061 J	0.086 J	0.286 J	14.071	95.122	0.379 J	1.391	1.478	0.637 J	2.146	0.639 J	0.043 U	0.25 J	2.286
G324-1	LW2-G324-1	0.151 U	0.283 J	0.598 J	2.32	99.441 J	844.465 J	2.434	3.438	5.454 U	2.172	9.222	2.778	0.241 U	1.155	16.158
G324-2	LW2-G324-2	0.062 U	0.13 J	0.188 J	0.572 J	31.336 J	408.577 J	1.36 J	2.823	3.594	1.381	6.703	2.081	0.109 U	0.727 J	5.875
G325	LW2-G325	0.242 U	0.323 J	0.211 J	0.682 J	26.127	271.313	1.191	4.084	5.695	2.018	14.909	3.501	0.176 U	0.926 J	10.545
G326	LW2-G326	0.454	0.387 J	0.538 J	1.782	79.962	1046.002 J	3.844	2.406	2.904	1.676	8.76	3.959	0.138 J	2.653	36.42

Table 4-12. Dioxin, Furan, and PCB Concentrations Used in 2, 3, 7, 8 – TCDD TEQ Value Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	55673-89-7 1,2,3,4,7,8,9-Heptachlorodibenzofuran pg/g	39001-02-0 Octachlorodibenzofuran pg/g	32598-13-3 3,3',4,4'-Tetrachlorobiphenyl pg/g	70362-50-4 3,4,4',5-Tetrachlorobiphenyl pg/g	57465-28-8 3,3',4,4',5-Pentachlorobiphenyl pg/g	32774-16-6 3,3',4,4',5,5'-Hexachlorobiphenyl pg/g	74472-37-0 2,3,4,4',5-Pentachlorobiphenyl pg/g	PCB106_118 PCB106 & 118 pg/g	65510-44-3 2,3',4,4',5'-Pentachlorobiphenyl pg/g	38380-08-4 2,3,3',4,4',5-Hexachlorobiphenyl pg/g	69782-90-7 2,3,3',4,4',5'-Hexachlorobiphenyl pg/g	52663-72-6 2,3',4,4',5,5'-Hexachlorobiphenyl pg/g	39635-31-9 2,3,3',4,4',5,5'-Heptachlorobiphenyl pg/g	32598-14-4 2,3,3',4,4'-Pentachlorobiphenyl pg/g	2,3,7,8-TCDD TEQ pg/g
Location	**Sample ID**															
Surface Interval Sediment Samples																
D1-1	LW2-D1-1	0.042 JT	1.793 UT													0.0737 JT
D1-2	LW2-D1-2	0.085 U	6.815 U													0.0989 JT
D2	LW2-D2	0.051 J	2.577 U													0.068 JT
G020	LW2-G020	0.285 J	12.136													0.975 JT
G038	LW2-G038	0.148 J	6.526													1.1 JT
G060	LW2-G060	0.071 J	2.603													0.279 JT
G061	LW2-G061	0.227 J	11.476													5.67 JT
G062	LW2-G062	2.425	110.931													7.01 JT
G064	LW2-G064	0.083 JT	4.58 JT													0.429 JT
G066	LW2-G066	0.045 U	2.278 J													0.206 JT
G077	LW2-G077	0.168 U	2.769 J													0.13 JT
G086	LW2-G086	0.194 U	6.577													0.451 JT
G105	LW2-G105	0.455 J	14.629													1.62 JT
G111	LW2-G111	0.553 J	20.462													0.831 JT
G127	LW2-G127	0.417 U	14.015 J													0.731 JT
G133	LW2-G133	0.376 UT	22.359 JT													3.5 JT
G163	LW2-G163	0.01 U	0.213 U													0.00803 JT
G185	LW2-G185	0.787 J	16.878													5.58 JT
G192	LW2-G192	4.68	31.288													13.5 JT
G207	LW2-G207	0.352 J	12.748													2.05 JT
G210	LW2-G210	0.08 U	0.137 U													1.16 JT
G245	LW2-G245	0.588 U	6.369													0.865 JT
G247	LW2-G247	1.671	100.878													3.58 JT
G260	LW2-G260	1.676 T	44.792 JT													2.62 JT
G307	LW2-G307	0.581 J	16.241													6.11 JT
G313	LW2-G313	1.987	61.629													5.27 JT
G314	LW2-G314	2.251	29.491													5.23 JT
G315	LW2-G315	1.966	14.847													9.2 JT
G316	LW2-G316	0.032 U	1.637													0.205 JT
G317	LW2-G317	0.117 U	1.743 J													0.237 JT
G321	LW2-G321	4.462	60.082													7.83 T
G323	LW2-G323	0.625 J	7.436													1.15 JT
G324-1	LW2-G324-1	4.257 J	66.72 J													4.85 JT
G324-2	LW2-G324-2	1.415 J	14.214 J													2.87 JT
G325	LW2-G325	2.832	21.653													4.59 JT
G326	LW2-G326	2.734	82.368													5.54 JT

Table 4-12. Dioxin, Furan, and PCB Concentrations Used in 2, 3, 7, 8 – TCDD TEQ Value Calculations for Beach, Surface, and Subsurface Sediment Samples.

CAS No / Chemical Name / Unit		1746-01-6 2,3,7,8-Tetrachlorodibenzo-p-dioxin pg/g	40321-76-4 1,2,3,7,8-Pentachlorodibenzo-p-dioxin pg/g	39227-28-6 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin pg/g	19408-74-3 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin pg/g	35822-46-9 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin pg/g	3268-87-9 Octachlorodibenzo-p-dioxin pg/g	57653-85-7 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin pg/g	51207-31-9 2,3,7,8-Tetrachlorodibenzofuran pg/g	57117-41-6 1,2,3,7,8-Pentachlorodibenzofuran pg/g	57117-31-4 2,3,4,7,8-Pentachlorodibenzofuran pg/g	70648-26-9 1,2,3,4,7,8-Hexachlorodibenzofuran pg/g	57117-44-9 1,2,3,6,7,8-Hexachlorodibenzofuran pg/g	72918-21-9 1,2,3,7,8,9-Hexachlorodibenzofuran pg/g	60851-34-5 2,3,4,6,7,8-Hexachlorodibenzofuran pg/g	67562-39-4 1,2,3,4,6,7,8-Heptachlorodibenzofuran pg/g
Location	**Sample ID**															
Surface Interval Sediment Samples																
G327	LW2-G327	0.097 U	0.221 J	0.204 J	0.59 J	58.331	480.302	2.149	0.915	0.6 U	0.621 J	2.399 J	1.676 J	0.456 J	0.938 U	15.341
G329	LW2-G329	0.384 U	0.167 U	0.21 U	0.227 U	11.173	108.001	0.411 J	3.229	3.752	1.253 J	5.767	1.476 J	0.126 U	0.438 J	3.441
G330	LW2-G330	7.227	10.204	1.261 J	2.662	61.531	532.648	6.48	27.739	16.932	8.246	40.101	10.929	0.127 U	3.394	32.756
G331	LW2-G331	0.038 U	0.042 U	0.601 J	2.248	206.11	2065.098 J	3.109	7.461	9.053	1.832	10.875 J	3.127 J	1.254	1.418	14.854
G332	LW2-G332	111.091	20.536	5.203	16.347	412.962	3839.061	35.297	317.593	110.21	47.694	242.705	1.971 U	2.71 J	37.302	226.363
G333	LW2-G333	0.054 U	0.18 U	0.641 U	2.883	160.105	1085.422 J	7.242	93.207	138.14	42.109	166.832 J	48.614 J	19.303	13.452	122.885
G334	LW2-G334	1.014	0.654 J	0.115 U	0.444 U	19.293	167.819	1.013 J	14.182	22.148	10.298	43.036	11.108	0.429 U	3.317	24.082
G335	LW2-G335	0.027 U	0.179 U	0.261 U	0.744 J	22.048	111.839	1.035	10.264	11.779	4.439	19.722	4.729	1.891	1.101	10.678
G351	LW2-G351	0.118 J	0.193 U	0.36 J	0.975 U	102.878	869.815	2.668 U	189.915	465.006 U	166.877	844.251 U	222.019 U	7.45	29.994	302.4
G351-2	LW2-G351-2	0.125 JT	0.261 JT	0.177 UT	0.853 JT	131.129 T	1354.968 T	2.498 JT	423.067 T	515.779 T	329.729 T	553.368 JT	233.579 JT	3.142 JT	46.311 JT	222.908 JT
G372-1	LW2-G372-1	0.092 UT	0.154 UT	0.161 UT	0.482 JT	24.725 T	174.033 T	1.051 JT	0.136 UT	0.108 UT	0.119 UT	0.398 JT	0.096 UT	0.12 UT	0.104 UT	3.681 JT
G372-2	LW2-G372-2	0.105 U	0.131 U	0.121 U	0.573 J	57.965	395.947	1.553 J	0.299 U	0.078 U	0.09 U	0.436 J	0.08 U	0.106 U	0.09 U	5.081
G374	LW2-G374	0.022 U	0.079 U	0.131 U	0.505 J	14.677	118.604	0.766 J	0.294 U	0.034 U	0.072 U	0.26 J	0.125 U	0.04 U	0.209 J	2.751
G377	LW2-G377	0.031 U	0.072 J	0.105 J	0.333 J	17.561	137.668	0.634 J	0.376 U	0.908	0.322 J	1.421	0.456 U	0.035 U	0.309 U	4.683
G397	LW2-G397	0.07 U	0.151 J	0.238 U	0.929 J	74.47	562.424	3.383	0.355 U	0.252 J	0.805 J	8.124	1.341	0.112 U	1.923	35.454
G403	LW2-G403	0.02 U	0.024 U	0.034 U	0.15 U	6.292	59.654 J	0.225 U	0.093 U	0.071 U	0.06 J	0.171 U	0.127 J	0.055 U	0.11 J	1.322
G420	LW2-G420	0.016 UT	0.068 JT	0.0825 JT	0.262 JT	11.625 JT	100.156 JT	0.493 JT	0.092 UT	0.042 JT	0.091 JT	0.455 JT	0.4 JT	0.016 UT	0.18 JT	2.583 JT
G426	LW2-G426	0.185 U	1.096 J	4.276 J	7.176	2410.3	19201.14 J	33.118 J	1.617	3.283	4.17	16.019 J	4.118 J	0.176 U	6.112 J	75.986
G437	LW2-G437	0.022 U	0.06 J	0.063 J	0.208 J	15.36	153.532	0.517 U	0.12 U	0.06 J	0.076 J	0.226 J	0.174 J	0.036 U	0.176 U	1.946
G450-1	LW2-G450-1	0.294 J	0.161 J	0.233 U	0.904 J	43.856	566.372	1.516 J	0.351	0.094 J	0.156 U	0.534 J	0.258 J	0.049 U	0.345 J	7.763
G450-2	LW2-G450-2	0.11 UT	0.109 UT	0.142 UT	0.138 UT	0.863 JT	6.462 JT	0.156 UT	0.074 UT	0.089 UT	0.103 UT	0.095 UT	0.099 UT	0.167 UT	0.111 UT	0.19 UT
G454	LW2-G454	0.014 U	0.054 U	0.061 U	0.206 J	4.797	30.283	0.316 J	0.116 U	0.033 J	0.074 J	0.129 U	0.085 J	0.011 U	0.146 J	0.91
U1C-1	LW2-U1C-1	0.018 UT	0.033 JT	0.057 JT	0.175 JT	33.846 T	211.997 JT	1.22 JT	0.094 JT	0.353 JT	0.186 JT	0.688 JT	0.289 JT	0.007 UT	0.726 JT	10.447 T
U1C-2	LW2-U1C-2	0.04 U	0.035 J	0.03 U	0.122 J	2.433 U	18.856 U	0.206 J	0.076 U	0.022 J	0.024 U	0.054 J	0.049 J	0.007 U	0.058 J	0.534 U
U1C-3	LW2-U1C-3	0.006 U	0.006 U	0.017 J	0.055 J	1.223 U	8.635 U	0.092 J	0.051 U	0.005 U	0.017 U	0.061 U	0.005 U	0.006 U	0.005 U	0.253 U
U2C-1	LW2-U2C-1	0.007 U	0.03 J	0.047 J	0.136 J	4.086 U	30.816 U	0.207 J	0.046 J	0.017 J	0.026 J	0.067 J	0.038 J	0.004 U	0.051 J	0.742 U
U2C-2	LW2-U2C-2	0.022 U	0.03 J	0.033 U	0.125 J	3.489 U	35.95 U	0.217 J	0.055 J	0.02 J	0.03 J	0.071 J	0.051 J	0.004 U	0.06 J	0.644 U
U2C-3	LW2-U2C-3	0.022 U	0.024 J	0.031 J	0.094 J	2.908 U	24.88 U	0.156 J	0.039 U	0.014 U	0.021 U	0.047 J	0.026 J	0.01 U	0.03 J	0.408 U
U3C-1	LW2-U3C-1	0.009 U	0.03 J	0.065 J	0.299 J	15.872	105.982	0.44 J	0.096 U	0.026 J	0.033 J	0.084 J	0.047 J	0.005 U	0.046 J	0.751 J
U3C-2	LW2-U3C-2	0.008 U	0.015 J	0.028 J	0.075 J	1.565	11.67	0.105 J	0.121 U	0.005 U	0.011 J	0.033 J	0.018 U	0.003 U	0.014 J	0.273 J
U3C-3	LW2-U3C-3	0.011 U	0.038 J	0.048 J	0.154 J	3.853	30.125	0.252 J	0.096 U	0.017 U	0.031 J	0.077 U	0.049 J	0.009 U	0.057 J	0.738 J
U4Q-1	LW2-U4Q-1	0.014 U	0.019 U	0.013 U	0.064 J	1.361 U	7.779 U	0.07 U	0.023 U	0.012 U	0.013 U	0.032 U	0.009 U	0.009 U	0.009 U	0.195 J
U4Q-2	LW2-U4Q-2	0.014 U	0.01 U	0.023 U	0.084 J	1.996 U	11.423 U	0.087 J	0.014 U	0.006 U	0.006 U	0.028 U	0.009 U	0.009 U	0.008 U	0.332 J
U4Q-3	LW2-U4Q-3	0.009 U	0.009 U	0.032 J	0.094 J	2.154 U	15.389 U	0.139 J	0.012 U	0.008 U	0.026 J	0.045 U	0.027 J	0.006 U	0.006 U	0.335 J
U5Q-1	LW2-U5Q-1	0.009 UT	0.021 JT	0.024 JT	0.082 JT	1.456 UT	11.948 UT	0.128 JT	0.07 UJT	0.102 JT	0.006 UT	0.115 JT	0.0415 JT	0.006 UT	0.042 JT	0.375 JT
U5Q-2	LW2-U5Q-2	0.01 U	0.006 U	0.028 J	0.129 J	5.36	38.094	0.205 J	0.075 U	0.005 U	0.018 J	0.048 U	0.022 U	0.006 U	0.007 U	1.188
U5Q-3	LW2-U5Q-3	0.009 U	0.009 U	0.011 J	0.041 J	1.149 U	8.249 U	0.064 J	0.014 U	0.005 U	0.005 U	0.032 U	0.015 J	0.004 U	0.004 U	0.222 J
U6TOC-1	LW2-U6TOC-1	0.011 U	0.01 U	0.024 J	0.069 J	1.389 U	10.322 U	0.103 J	0.093 U	0.006 U	0.007 U	0.035 U	0.021 J	0.007 U	0.006 U	0.283 J
U6TOC-2	LW2-U6TOC-2	0.019 U	0.018 U	0.015 U	0.016 U	0.815 U	5.947 U	0.053 J	0.03 U	0.011 U	0.012 U	0.026 U	0.012 U	0.013 U	0.012 U	0.154 J
U6TOC-3	LW2-U6TOC-3	0.021 U	0.019 U	0.022 U	0.085 J	1.86 U	20.046 U	0.118 J	0.115 U	0.01 U	0.01 U	0.053 U	0.024 J	0.011 U	0.011 U	0.355 J

Table 4-12. Dioxin, Furan, and PCB Concentrations Used in 2, 3, 7, 8 – TCDD TEQ Value Calculations for Beach, Surface, and Subsurface Sediment Samples.

CAS No / Chemical Name / Unit		55673-89-7 1,2,3,4,7,8,9-Heptachlorodibenzofuran pg/g	39001-02-0 Octachlorodibenzofuran pg/g	32598-13-3 3,3',4,4'-Tetrachlorobiphenyl pg/g	70362-50-4 3,4,4',5-Tetrachlorobiphenyl pg/g	57465-28-8 3,3',4,4',5-Pentachlorobiphenyl pg/g	32774-16-6 3,3',4,4',5,5'-Hexachlorobiphenyl pg/g	74472-37-0 2,3,4,4',5-Pentachlorobiphenyl pg/g	PCB106_118 PCB106 & 118 pg/g	65510-44-3 2,3',4,4',5'-Pentachlorobiphenyl pg/g	38380-08-4 2,3,3',4,4',5-Hexachlorobiphenyl pg/g	69782-90-7 2,3,3',4,4',5'-Hexachlorobiphenyl pg/g	52663-72-6 2,3',4,4',5,5'-Hexachlorobiphenyl pg/g	39635-31-9 2,3,3',4,4',5,5'-Heptachlorobiphenyl pg/g	32598-14-4 2,3,3',4,4'-Pentachlorobiphenyl pg/g	2,3,7,8-TCDD TEQ pg/g
Location	**Sample ID**															
Surface Interval Sediment Samples																
G327	LW2-G327	0.952 J	28.507													2.17 JT
G329	LW2-G329	0.889 J	7.266													2.11 JT
G330	LW2-G330	8.737	60.002													32.7 JT
G331	LW2-G331	2.251 J	69.796													6.82 JT
G332	LW2-G332	61.036	535.23													234 JT
G333	LW2-G333	32.506 J	217.319													66.4 JT
G334	LW2-G334	9.891	44.406													15.7 JT
G335	LW2-G335	4.98	42.163													7.15 JT
G351	LW2-G351	121.856	443.899 U													112 JT
G351-2	LW2-G351-2	84.4835 T	364.051 T													322 JT
G372-1	LW2-G372-1	0.269 UT	10.863 T													0.496 JT
G372-2	LW2-G372-2	0.389 U	13.161													0.928 JT
G374	LW2-G374	0.27 U	8.55													0.361 JT
G377	LW2-G377	0.518 J	22.525													0.771 JT
G397	LW2-G397	2.406	88.359													3.32 JT
G403	LW2-G403	0.143 U	3.232													0.136 JT
G420	LW2-G420	0.206 JT	10.074 JT													0.458 JT
G426	LW2-G426	3.108	91.649													37.4 JT
G437	LW2-G437	0.071 U	3.572													0.357 JT
G450-1	LW2-G450-1	0.346 U	57.757													1.43 JT
G450-2	LW2-G450-2	0.372 UT	1.07 JT													0.00938 JT
G454	LW2-G454	0.07 J	1.693 J													0.175 JT
U1C-1	LW2-U1C-1	0.328 JT	12.043 T													0.937 JT
U1C-2	LW2-U1C-2	0.027 U	1.076 U													0.085 JT
U1C-3	LW2-U1C-3	0.014 U	0.666 U													0.0164 JT
U2C-1	LW2-U2C-1	0.061 J	3.637 U													0.104 JT
U2C-2	LW2-U2C-2	0.051 J	1.973 U													0.104 JT
U2C-3	LW2-U2C-3	0.025 J	1.162 U													0.0627 JT
U3C-1	LW2-U3C-1	0.046 J	2.143													0.323 JT
U3C-2	LW2-U3C-2	0.016 J	1.021 J													0.0658 JT
U3C-3	LW2-U3C-3	0.055 J	2.417 U													0.159 JT
U4Q-1	LW2-U4Q-1	0.028 U	0.669 U													0.00835 JT
U4Q-2	LW2-U4Q-2	0.03 U	1.242 U													0.0204 JT
U4Q-3	LW2-U4Q-3	0.032 J	0.857 U													0.0459 JT
U5Q-1	LW2-U5Q-1	0.029 JT	0.578 UT													0.0734 JT
U5Q-2	LW2-U5Q-2	0.05 J	3.802													0.115 JT
U5Q-3	LW2-U5Q-3	0.009 U	0.492 U													0.0153 JT
U6TOC-1	LW2-U6TOC-1	0.012 U	0.846 U													0.0245 JT
U6TOC-2	LW2-U6TOC-2	0.033 U	0.462 U													0.00684 JT
U6TOC-3	LW2-U6TOC-3	0.02 U	1.268 U													0.0263 JT

Table 4-12. Dioxin, Furan, and PCB Concentrations Used in 2, 3, 7, 8 – TCDD TEQ Value Calculations for Beach, Surface, and Subsurface Sediment Samples.

CAS No / Chemical Name / Unit		1746-01-6 2,3,7,8-Tetrachlorodibenzo-p-dioxin pg/g	40321-76-4 1,2,3,7,8-Pentachlorodibenzo-p-dioxin pg/g	39227-28-6 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin pg/g	19408-74-3 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin pg/g	35822-46-9 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin pg/g	3268-87-9 Octachlorodibenzo-p-dioxin pg/g	57653-85-7 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin pg/g	51207-31-9 2,3,7,8-Tetrachlorodibenzofuran pg/g	57117-41-6 1,2,3,7,8-Pentachlorodibenzofuran pg/g	57117-31-4 2,3,4,7,8-Pentachlorodibenzofuran pg/g	70648-26-9 1,2,3,4,7,8-Hexachlorodibenzofuran pg/g	57117-44-9 1,2,3,6,7,8-Hexachlorodibenzofuran pg/g	72918-21-9 1,2,3,7,8,9-Hexachlorodibenzofuran pg/g	60851-34-5 2,3,4,6,7,8-Hexachlorodibenzofuran pg/g	67562-39-4 1,2,3,4,6,7,8-Heptachlorodibenzofuran pg/g
Location	**Sample ID**															
Subsurface Sediment Samples																
C020	LW2-C020-B	0.055 U	0.131 U	0.189 U	0.93 J	48.272	403.274	2.274	0.712	0.382 J	0.563 J	0.923	0.331 U	0.061 U	0.308 J	4.221
C020	LW2-C020-C	0.037 U	0.09 U	0.163 U	0.364 J	23.872	192.198	1.152	1.213	0.447 J	0.95	1.101	0.432 J	0.119 U	0.525 J	3.952
C038	LW2-C038-B	0.007 U	0.044 J	0.084 J	0.415 J	9.079	91.546 J	0.391 U	0.118 U	0.09 U	0.118 J	0.631 J	0.285 J	0.026 U	0.471 J	2.975
C038	LW2-C038-C	0.009 U	0.023 U	0.032 U	0.034 U	0.816 J	8.123	0.036 U	0.01 U	0.016 U	0.018 U	0.068 J	0.07 U	0.025 U	0.022 U	1.138
C038	LW2-C038-D	0.007 U	0.013 U	0.019 U	0.021 U	0.041 U	0.623 U	0.023 U	0.006 U	0.008 U	0.009 U	0.012 U	0.013 U	0.018 U	0.014 U	0.024 U
C060	LW2-C060-B	0.507	0.947 J	0.565 J	1.937	51.445	496.053	2.468	3.502	4.806	1.96	12.313	4.03	1.123	0.664 J	18.302
C060	LW2-C060-C	0.028 U	0.03 U	0.139 J	0.894	40.512	407.295	1.037	0.801	0.956 U	0.058 U	1.794	1.619	0.463 J	1.661	26.034
C061	LW2-C061-B	0.05 U	0.332 J	0.599 J	1.762	58.8	356.101	3.128	0.366	0.41 J	0.244 J	0.999	0.576 J	0.039 U	0.593 J	8.198
C061	LW2-C061-C	0.1 J	0.138 J	0.205 J	0.597 J	28.699	329.006	1.161	0.624	1.157	0.515 J	2.395	1.071	0.014 U	0.298 J	9.114
C061	LW2-C061-E	0.003 U	0.005 U	0.009 U	0.05 J	1.584 U	20.106 U	0.084 J	0.013 U	0.016 J	0.013 U	0.053 U	0.039 J	0.01 U	0.039 U	0.418 U
C062	LW2-C062-B	0.019 UT	0.058 JT	0.041 JT	0.16 JT	2.63 T	24.6 T	0.233 JT	0.112 UT	0.072 JT	0.0825 JT	0.275 JT	0.241 JT	0.011 JT	0.129 JT	2.96 T
C062	LW2-C062-C	0.011 U	0.007 U	0.005 U	0.006 U	0.053 J	0.499 J	0.006 U	0.009 U	0.004 U	0.005 U	0.015 J	0.003 U	0.003 U	0.003 U	0.007 U
C062	LW2-C062-D	0.01 U	0.009 U	0.005 U	0.017 J	0.085 U	0.759 U	0.006 U	0.01 U	0.005 U	0.005 U	0.014 J	0.003 U	0.004 U	0.004 U	0.012 J
C064	LW2-C064-B	0.011 U	0.016 U	0.015 U	0.016 U	0.43 U	3.653 U	0.017 U	0.112 U	0.01 U	0.012 U	0.014 U	0.015 U	0.02 U	0.015 U	0.164 J
C064	LW2-C064-C	0.008 U	0.009 U	0.005 U	0.005 U	0.132 U	0.989 U	0.006 U	0.01 U	0.005 U	0.005 U	0.024 U	0.004 U	0.004 U	0.004 U	0.032 U
C066	LW2-C066-B	0.052 J	0.031 U	0.008 U	0.008 U	100.209	1636.676 J	1.847	0.078 U	0.076 J	0.14 J	0.266 J	0.017 U	0.021 U	0.02 U	4.658
C066	LW2-C066-C	0.006 U	0.014 U	0.014 U	0.015 U	1.312 U	27.858 U	0.021 J	0.005 U	0.01 U	0.01 U	0.01 U	0.011 U	0.014 U	0.012 U	0.063 J
C077	LW2-C077-C	0.015 U	0.09 U	0.147 J	0.255 J	28.328	271.09	0.932	0.469 U	1.249 U	0.517 J	2.303	1.114 J	0.269 U	0.639 J	11.69
C077	LW2-C077-D	0.004 U	0.006 U	0.009 U	0.009 U	0.442 U	3.416 U	0.01 U	0.011 U	0.004 U	0.004 U	0.02 U	0.009 U	0.009 U	0.01 U	0.062 U
C086	LW2-C086-B	0.035 J	0.092 J	0.112 J	0.336	12.862	97.288	0.607	0.245	0.213	0.284	0.657	0.246	0.09 J	0.311	2.236
C086	LW2-C086-C	0.002 U	0.003 U	0.003 U	0.039 J	0.531 U	4.732 U	0.033 J	0.252	0.036 J	0.033 J	0.028 U	0.008 U	0.002 U	0.002 U	0.083 U
C105	LW2-C105-B	0.028 U	0.036 J	0.232 J	0.057 J	3.901	37.959 U	0.263 J	0.148 J	0.155 J	0.121 J	0.286 J	0.167 J	0.019 U	0.076 J	1.621
C105	LW2-C105-C	0.01 U	0.012 U	0.012 U	0.014 U	0.147 U	1.281 U	0.015 U	0.019 U	0.01 U	0.012 U	0.012 U	0.012 U	0.018 U	0.013 U	0.024 U
C111-1	LW2-C111-B	0.035 U	0.113 J	0.134 J	0.374 J	18.396	161.465	1.311	0.188	0.256 J	0.189 J	0.588 J	0.299 J	0.023 U	0.286 J	3.622
C111-1	LW2-C111-C	0.256	0.375 J	0.448 J	1.206	116.026	1423.863 J	4.129	1.188	2.436	0.961 J	9.867	2.847	0.044 U	1.217	17.877
C111-1	LW2-C111-F	0.015 U	0.11 J	0.098 J	0.205 J	13.425	206.475	0.911 J	0.146 U	0.126 J	0.193 J	0.441 J	1.65 J	0.041 U	0.362 J	18.693
C111-2	LW2-C111-B2	0.069 U	0.224 J	0.272 J	0.983	90.703	683.335 J	3.172	0.376	0.294 J	0.304 J	0.81	0.418 J	0.043 U	0.471 J	7.549
C111-2	LW2-C111-C2	0.242 U	0.503 J	0.556 J	1.44	93.089	1063.204 J	4.69	1.348	1.942	1.041	4.414	1.958	0.057 U	0.78 J	22.027
C111-2	LW2-C111-E2	0.172 U	0.52 U	0.469 J	1.028	76.912	881.232 J	4.702	0.785	1.642 U	1.598	3.598	9.447	0.146 U	2.319	124.501
C133	LW2-C133-B	0.139 J	0.134 J	0.236 J	0.663 J	36.95	260	1.815	0.454	0.318 J	0.222 J	0.651 J	0.424 J	0.335 J	0.357 J	5.848
C133	LW2-C133-D	0.636	0.889 J	0.956 J	2.429	148.846	1430.345	6.849	20.195	39.247	15.382	46.425	14.565	7.056	2.984	42.108
C163-1	LW2-C163-B1	0.003 U	0.004 U	0.005 U	0.005 U	0.117 U	0.8 U	0.005 U	0.007 U	0.003 U	0.004 U	0.015 U	0.004 U	0.005 U	0.005 U	0.036 U
C163-1	LW2-C163-C1	0.003 U	0.005 U	0.005 U	0.033 U	0.185 U	1.078 U	0.005 U	0.007 U	0.003 U	0.003 U	0.032 U	0.014 J	0.004 U	0.01 U	0.038 U
C163-2	LW2-C163-B2	0.004 UT	0.005 UT	0.004 UT	0.004 UT	0.173 UT	1.653 UT	0.005 UT	0.005 UT	0.004 UT	0.004 UT	0.022 JT	0.003 UT	0.003 UT	0.004 UT	0.031 UT
C163-2	LW2-C163-C2	0.003 UT	0.147 JT	0.036 JT	0.151 JT	0.126 UT	0.983 UT	0.316 JT	0.009 UT	0.118 JT	0.226 JT	0.32 JT	0.008 UT	0.006 UT	0.005 UT	0.031 UT
C185	LW2-C185-B	0.512	0.679 J	0.566 J	1.639	69.395	625.024	3.078	8.104	11.446	4.54	25.2	6.547	0.288 U	1.244	21.557
C185	LW2-C185-C	0.058 U	0.081 U	0.122 U	0.136 U	20.404	240.206	0.984 J	0.544	0.584 J	0.335 U	0.981 J	0.789 J	0.146 U	0.941 J	22.768
C192	LW2-C192-B	0.08 U	0.267 J	0.278 J	1.167	60.084	566.422	3.385	0.521	0.636 J	0.433 J	1.797	0.892 J	0.055 U	0.787 J	10.827
C192	LW2-C192-C	0.123 U	0.58 J	0.346 J	0.931 J	75.942	767.951	4.41	1.454	1.906 U	1.177	4.608 J	2.84 J	0.116 U	2.087 J	53.158
C192	LW2-C192-D	0.023 U	0.041 J	0.049 J	0.122 J	4.333	55.16	0.316 J	0.095 J	0.063 J	0.1 J	0.235 J	0.45 J	0.034 U	0.158 J	6.069

Table 4-12. Dioxin, Furan, and PCB Concentrations Used in 2, 3, 7, 8 – TCDD TEQ Value Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	55673-89-7 1,2,3,4,7,8,9-Heptachlorodibenzofuran pg/g	39001-02-0 Octachlorodibenzofuran pg/g	32598-13-3 3,3',4,4'-Tetrachlorobiphenyl pg/g	70362-50-4 3,4,4',5-Tetrachlorobiphenyl pg/g	57465-28-8 3,3',4,4',5-Pentachlorobiphenyl pg/g	32774-16-6 3,3',4,4',5,5'-Hexachlorobiphenyl pg/g	74472-37-0 2,3,4,4',5-Pentachlorobiphenyl pg/g	PCB106_118 PCB106 & 118 pg/g	65510-44-3 2,3',4,4',5'-Pentachlorobiphenyl pg/g	38380-08-4 2,3,3',4,4',5-Hexachlorobiphenyl pg/g	69782-90-7 2,3,3',4,4',5'-Hexachlorobiphenyl pg/g	52663-72-6 2,3',4,4',5,5'-Hexachlorobiphenyl pg/g	39635-31-9 2,3,3',4,4',5,5'-Heptachlorobiphenyl pg/g	32598-14-4 2,3,3',4,4'-Pentachlorobiphenyl pg/g	2,3,7,8-TCDD TEQ pg/g
Subsurface Sediment Samples																
C020	LW2-C020-B	0.28 J	10.284													1.38 JT
C020	LW2-C020-C	0.319 U	8.009													1.27 JT
C038	LW2-C038-B	0.238 J	3.369													0.424 JT
C038	LW2-C038-C	0.051 U	0.749 J													0.0272 JT
C038	LW2-C038-D	0.04 U	0.059 U													0 UT
C060	LW2-C060-B	3.327	32.004													6.12 JT
C060	LW2-C060-C	0.542 U	20.206 U													1.55 JT
C061	LW2-C061-B	0.548 J	14.442 U													1.99 JT
C061	LW2-C061-C	0.046 U	18.761													1.6 JT
C061	LW2-C061-E	0.01 U	0.49 U													0.0181 JT
C062	LW2-C062-B	0.0715 JT	1.9 JT													0.271 JT
C062	LW2-C062-C	0.01 U	0.033 J													0.00208 JT
C062	LW2-C062-D	0.01 U	0.01 U													0.00322 JT
C064	LW2-C064-B	0.052 U	0.223 J													0.00166 JT
C064	LW2-C064-C	0.005 U	0.05 U													0 UT
C066	LW2-C066-B	0.152 J	16.691													1.55 JT
C066	LW2-C066-C	0.028 U	0.241 J													0.00275 JT
C077	LW2-C077-C	0.693 J	18.477													1.23 JT
C077	LW2-C077-D	0.018 U	0.114 U													0 UT
C086	LW2-C086-B	0.145 U	4.813													0.701 JT
C086	LW2-C086-C	0.004 U	0.158 U													0.0507 JT
C105	LW2-C105-B	0.059 U	2.181													0.283 JT
C105	LW2-C105-C	0.043 U	0.111 U													0 UT
C111-1	LW2-C111-B	0.194 J	6.411													0.777 JT
C111-1	LW2-C111-C	2.291	91.724													4.84 JT
C111-1	LW2-C111-F	0.168 U	10.785													0.922 JT
C111-2	LW2-C111-B2	0.31 J	14.109													2.1 JT
C111-2	LW2-C111-C2	1.602	70.713													3.92 JT
C111-2	LW2-C111-E2	1.081 U	113.805													5.15 JT
C133	LW2-C133-B	0.564 J	6.744													1.35 JT
C133	LW2-C133-D	8.676	107.614													23.5 JT
C163-1	LW2-C163-B1	0.008 U	0.057 U													0 UT
C163-1	LW2-C163-C1	0.008 U	0.067 U													0.0014 JT
C163-2	LW2-C163-B2	0.005 UT	0.103 UT													0.0022 JT
C163-2	LW2-C163-C2	0.114 JT	0.038 UT													0.349 JT
C185	LW2-C185-B	5.623	46.944													9.7 JT
C185	LW2-C185-C	0.506 U	10.318													0.91 JT
C192	LW2-C192-B	0.596 J	23.275													2.17 JT
C192	LW2-C192-C	1.387	71.705													4.22 JT
C192	LW2-C192-D	0.08 U	3.767													0.347 JT

Table 4-12. Dioxin, Furan, and PCB Concentrations Used in 2, 3, 7, 8 – TCDD TEQ Value Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID (CAS No / Chemical Name / Unit)	1746-01-6 2,3,7,8-Tetrachlorodibenzo-p-dioxin pg/g	40321-76-4 1,2,3,7,8-Pentachlorodibenzo-p-dioxin pg/g	39227-28-6 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin pg/g	19408-74-3 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin pg/g	35822-46-9 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin pg/g	3268-87-9 Octachlorodibenzo-p-dioxin pg/g	57653-85-7 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin pg/g	51207-31-9 2,3,7,8-Tetrachlorodibenzofuran pg/g	57117-41-6 1,2,3,7,8-Pentachlorodibenzofuran pg/g	57117-31-4 2,3,4,7,8-Pentachlorodibenzofuran pg/g	70648-26-9 1,2,3,4,7,8-Hexachlorodibenzofuran pg/g	57117-44-9 1,2,3,6,7,8-Hexachlorodibenzofuran pg/g	72918-21-9 1,2,3,7,8,9-Hexachlorodibenzofuran pg/g	60851-34-5 2,3,4,6,7,8-Hexachlorodibenzofuran pg/g	67562-39-4 1,2,3,4,6,7,8-Heptachlorodibenzofuran pg/g
Subsurface Sediment Samples																
C207-1	LW2-C207-B	0.078 U	0.562 J	0.542 U	2.222	123.469	1048.607 J	4.848	3.481	3.371	2.517	10.386	7.926	0.036 U	3.538	74.267
C207-1	LW2-C207-C	0.004 U	0.006 U	0.005 U	0.005 U	0.294 U	2.102 U	0.005 U	0.26 U	0.006 U	0.006 U	0.081 U	0.079 U	0.008 U	0.007 U	0.129 U
C207-1	LW2-C207-D	0.011 U	0.018 U	0.014 U	0.014 U	0.25 U	1.578 U	0.016 U	0.288 U	0.098 J	0.128 J	0.166 U	0.065 U	0.013 U	0.069 J	0.152 U
C207-2	LW2-C207-B2	0.096 JT	0.276 JT	0.239 JT	0.277 JT	18.4 T	168 T	1.24 JT	1.45 T	0.503 JT	0.339 JT	1.54 T	2.07 JT	0.013 UT	0.676 JT	27.9 T
C207-2	LW2-C207-C2	0.004 UT	0.008 UT	0.005 UT	0.005 UT	0.19 UT	1.387 UT	0.023 JT	0.4 T	0.005 UT	0.049 JT	0.055 UT	0.024 UT	0.007 UT	0.007 UT	0.074 UT
C210	LW2-C210-B	0.007 U	0.005 U	0.003 U	0.018 J	0.142 J	1.054 J	0.004 U	0.044 U	0.003 U	0.003 U	0.016 J	0.003 U	0.003 U	0.003 U	0.026 J
C210	LW2-C210-C	0.008 U	0.005 U	0.004 U	0.029 J	0.127 J	0.727 J	0.004 U	0.009 U	0.003 U	0.004 U	0.014 J	0.003 U	0.003 U	0.003 U	0.01 J
C245	LW2-C245-B	0.56	0.44 J	0.374 J	0.455 J	52.63	609.269	2.42	13.535	16.201	6.598	29.497	7.288	0.576 U	1.882	18.373
C245	LW2-C245-C	0.012 U	0.011 U	0.016 U	0.017 U	0.278 J	2.347 U	0.018 U	0.059 U	0.03 U	0.02 U	0.01 U	0.02 U	0.013 U	0.011 U	0.042 U
C245	LW2-C245-D	0.014 U	0.016 U	0.026 U	0.028 U	0.24 U	2.687 U	0.03 U	0.097 U	0.041 J	0.024 J	0.05 J	0.026 U	0.026 U	0.019 U	0.079 U
C245	LW2-C245-E	0.008 U	0.01 U	0.014 U	0.015 U	0.053 J	0.365 U	0.015 U	0.008 U	0.009 U	0.01 U	0.009 U	0.009 U	0.012 U	0.011 U	0.02 U
C247	LW2-C247-B	0.009 U	0.025 U	0.018 U	0.207 J	2.835 U	24.056 U	0.158 J	0.009 U	0.022 U	0.022 U	0.084 J	0.066 U	0.017 U	0.012 U	0.599 U
C247	LW2-C247-C	0.007 U	0.011 U	0.02 U	0.017 U	0.174 U	0.954 U	0.015 U	0.008 U	0.008 U	0.008 U	0.008 U	0.009 U	0.016 U	0.01 U	0.018 U
C247	LW2-C247-D	0.006 U	0.009 U	0.017 U	0.11 J	0.756 U	5.597 U	0.038 U	0.005 U	0.007 U	0.008 U	0.008 U	0.009 U	0.013 U	0.009 U	0.018 U
C260	LW2-C260-B	0.006 U	0.166 J	0.167 J	0.354 J	23.584	150.306	1.459	0.274 U	0.303 J	0.278 J	0.788 U	0.984 J	0.008 U	0.627 J	11.686
C260	LW2-C260-C	0.003 U	0.028 U	0.006 U	0.079 J	2.656	16.538 U	0.178 J	0.161 U	0.045 U	0.078 J	0.188 U	0.311 U	0.012 U	0.198 J	3.133
C313	LW2-C313-B	0.006 U	0.008 U	0.017 J	0.046 U	1.51 U	14.835	0.077 J	0.161 U	0.086 J	0.046 J	0.135 U	0.06 J	0.008 U	0.04 U	0.36 U
C313	LW2-C313-C	0.045 U	0.056 U	0.056 U	0.06 U	0.347 J	3.395	0.063 U	0.036 U	0.037 U	0.041 U	0.034 U	0.035 U	0.047 U	0.034 U	0.072 U
C314	LW2-C314-B	0.05 U	0.165 U	0.121 J	0.355 J	19.424	147.325	1.295	8.282	22.756	7.013	38.77	20.381	3.451	3.371	28.223
C314	LW2-C314-C	0.262	0.397 J	0.235 J	2.646	83.127	745.99	3.07	48.18	69.78	29.47	105.856	31.155	1.468	5.636	61.441
C316	LW2-C316-B	0.09 U	0.164 J	0.159 U	0.451 J	20.002	192.856	1.002 U	12.135	29.972	9.26	64.257	16.816	0.772 J	3.348	31.136
C316	LW2-C316-C	0.849	1.132	0.858 U	2.633	125.398	1396.829	5.152	134.82	207.475	85.932	330.269	97.019	4.762	15.019	168.317
C316	LW2-C316-D	0.066 J	0.351 J	0.445 J	1.053 J	187.165	1426.625 J	3.976	53.776	58.624	33.791	58.894	11.036	7.905	3.664	55.043
C323	LW2-C323-B	0.588	0.195 U	2.019	0.813 J	57.127	587.463	2.286	12.805	11.924	5.32	23.495	7.111	0.093 U	0.913 U	24.19
C323	LW2-C323-C	0.365	0.222 J	0.25 J	0.105 U	57.83	696.793	2.531	0.223	0.415 J	0.428 J	2.33	1.723	0.111 U	1.441	19.955
C323	LW2-C323-D	0.117 J	0.094 J	0.714 J	0.441 J	18.643	207.389	0.808 J	1.969	3.945	1.117	8.663	2.716	0.076 U	0.325 U	6.238
C324	LW2-C324-B	0.208	0.142 J	0.204 U	0.64 J	33.661	355.639	1.464	0.151 U	0.191 J	0.223 J	1.343	0.865 J	0.226 J	0.781 J	10.637
C324	LW2-C324-D	0.087 U	0.177 J	0.211 J	0.773 J	80.269	606.469	1.88	1.256	1.208	0.711 J	2.95	1.088	0.455 J	0.446 J	15.001
C324	LW2-C324-E	0.036 U	0.279 J	0.455 J	2.156	121.032	1117.16	5.086	195.608	4.657	1.402	8.911	2.93	1.129	2.331	32.035
C326	LW2-C326-B	0.2 U	0.153 J	0.197 J	0.562 J	25.794	282.812	1.291	1.254	1.197	0.679 J	2.376	0.995	0.394 J	0.663 J	6.574
C326	LW2-C326-C	0.257 T	0.193 JT	0.0905 JT	0.301 JT	13.4 JT	91.5 JT	0.661 JT	1.89 T	0.603 JT	0.342 JT	1.15 T	0.494 JT	0.024 JT	0.213 JT	5.66 JT
C327	LW2-C327-B	0.081 U	0.116 J	0.123 J	0.693 J	43.35	325.165	1.236	0.322	0.247 J	0.316 J	1.05	0.611 J	0.012 U	0.384 J	9.376
C327	LW2-C327-C	0.231	0.306 J	0.43 J	1.414	78.701	769.375	3.006	0.641	0.768 J	0.689 J	4.366	2.5	0.045 U	1.098	26.444
C329	LW2-C329-B	0.115 U	0.159 J	0.127 U	0.377 J	29.748	173.654	0.853 J	7.439	4.708	2.083	6.718	1.864	0.02 U	0.547 J	6.17
C329	LW2-C329-C	0.514	0.047 U	0.651 J	2.62	66.326	361.602	3.876	28.286	17.865 U	9.701	30.755	7.393	0.028 U	1.971	18.953
C329	LW2-C329-D	0.031 U	0.579 J	0.434 U	2.811	50.401	200.403	2.923	3.642	3.871 U	0.833	4.411	1.328	0.54 J	0.532 J	3.356
C331	LW2-C331-B	0.054 J	0.056 J	0.062 J	0.235 U	12.581	120.875	0.464 J	0.526	0.491 J	0.233 J	1.053 U	0.346 J	0.017 J	0.104 U	2.853
C331	LW2-C331-C	0.014 U	0.009 U	0.018 U	0.12 J	4.31	35.628	0.185 J	1.636	2.88	0.955	7.133	2.096	0.081 J	0.375 J	4.248
C331	LW2-C331-D	0.006 U	0.012 U	0.01 U	0.034 U	0.703 U	3.649 U	0.052 J	0.013 U	0.008 U	0.009 U	0.026 U	0.014 U	0.01 U	0.008 U	0.168 U
C331	LW2-C331-E	0.018 U	0.024 U	0.03 U	0.033 U	0.117 U	0.736 U	0.034 U	0.014 U	0.016 U	0.019 U	0.015 U	0.017 U	0.028 U	0.019 U	0.042 U

Table 4-12. Dioxin, Furan, and PCB Concentrations Used in 2, 3, 7, 8 – TCDD TEQ Value Calculations for Beach, Surface, and Subsurface Sediment Samples.

CAS No / Chemical Name / Unit		55673-89-7 1,2,3,4,7,8,9-Heptachlorodibenzofuran pg/g	39001-02-0 Octachlorodibenzofuran pg/g	32598-13-3 3,3',4,4'-Tetrachlorobiphenyl pg/g	70362-50-4 3,4,4',5-Tetrachlorobiphenyl pg/g	57465-28-8 3,3',4,4',5-Pentachlorobiphenyl pg/g	32774-16-6 3,3',4,4',5,5'-Hexachlorobiphenyl pg/g	74472-37-0 2,3,4,4',5-Pentachlorobiphenyl pg/g	PCB106_118 PCB106 & 118 pg/g	65510-44-3 2,3',4,4',5'-Pentachlorobiphenyl pg/g	38380-08-4 2,3,3',4,4',5-Hexachlorobiphenyl pg/g	69782-90-7 2,3,3',4,4',5'-Hexachlorobiphenyl pg/g	52663-72-6 2,3',4,4',5,5'-Hexachlorobiphenyl pg/g	39635-31-9 2,3,3',4,4',5,5'-Heptachlorobiphenyl pg/g	32598-14-4 2,3,3',4,4'-Pentachlorobiphenyl pg/g	2,3,7,8-TCDD TEQ pg/g
Location	**Sample ID**															
Subsurface Sediment Samples																
C207-1	LW2-C207-B	3.732	138.369													7.36 JT
C207-1	LW2-C207-C	0.013 U	0.238 U													0 UT
C207-1	LW2-C207-D	0.027 U	0.161 U													0.0758 JT
C207-2	LW2-C207-B2	0.023 UT	30.2 T													1.8 JT
C207-2	LW2-C207-C2	0.016 UT	0.115 UT													0.0668 JT
C210	LW2-C210-B	0.007 U	0.044 J													0.00519 JT
C210	LW2-C210-C	0.008 U	0.014 J													0.00574 JT
C245	LW2-C245-B	4.933	46.515													11.5 JT
C245	LW2-C245-C	0.025 U	0.069 U													0.00278 JT
C245	LW2-C245-D	0.078 U	0.269 U													0.0191 JT
C245	LW2-C245-E	0.029 U	0.041 U													0.00053 JT
C247	LW2-C247-B	0.032 U	0.794 U													0.0449 JT
C247	LW2-C247-C	0.033 U	0.059 U													0 UT
C247	LW2-C247-D	0.032 U	0.052 U													0.011 JT
C260	LW2-C260-B	0.396 J	36.627													1.05 JT
C260	LW2-C260-C	0.022 U	5.992 U													0.142 JT
C313	LW2-C313-B	0.048 U	0.866 J													0.0443 JT
C313	LW2-C313-C	0.098 U	0.224 U													0.00381 JT
C314	LW2-C314-B	8.936	26.797													12.8 JT
C314	LW2-C314-C	19.224	102.383													40.4 JT
C316	LW2-C316-B	12.005	53.407													16.7 JT
C316	LW2-C316-C	62.976	296.814													118 T
C316	LW2-C316-D	8.525	83.179													37 JT
C323	LW2-C323-B	4.325	65.13													9.62 JT
C323	LW2-C323-C	1.339	64.262													2.54 JT
C323	LW2-C323-D	1.162	15.057													2.78 JT
C324	LW2-C324-B	0.816 U	27.152													1.48 JT
C324	LW2-C324-D	1.057	41.125													2.53 JT
C324	LW2-C324-E	2.222	85.419													24.7 JT
C326	LW2-C326-B	0.716 U	15.765													1.68 JT
C326	LW2-C326-C	0.401 UT	18.5 JT													1.34 JT
C327	LW2-C327-B	0.52 U	19.678													1.29 JT
C327	LW2-C327-C	1.813	58.409													3.42 JT
C329	LW2-C329-B	1.285	9.524													3.61 JT
C329	LW2-C329-C	6.296	35.85													13.9 JT
C329	LW2-C329-D	0.864	5.184													3.18 JT
C331	LW2-C331-B	0.283 U	10.582													0.56 JT
C331	LW2-C331-C	1.078	10.829													1.89 JT
C331	LW2-C331-D	0.013 U	0.268 U													0.0052 JT
C331	LW2-C331-E	0.088 U	0.203 U													0 UT

Table 4-12. Dioxin, Furan, and PCB Concentrations Used in 2, 3, 7, 8 – TCDD TEQ Value Calculations for Beach, Surface, and Subsurface Sediment Samples.

Location	Sample ID	1746-01-6 2,3,7,8-Tetrachlorodibenzo-p-dioxin pg/g	40321-76-4 1,2,3,7,8-Pentachlorodibenzo-p-dioxin pg/g	39227-28-6 1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin pg/g	19408-74-3 1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin pg/g	35822-46-9 1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin pg/g	3268-87-9 Octachlorodibenzo-p-dioxin pg/g	57653-85-7 1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin pg/g	51207-31-9 2,3,7,8-Tetrachlorodibenzofuran pg/g	57117-41-6 1,2,3,7,8-Pentachlorodibenzofuran pg/g	57117-31-4 2,3,4,7,8-Pentachlorodibenzofuran pg/g	70648-26-9 1,2,3,4,7,8-Hexachlorodibenzofuran pg/g	57117-44-9 1,2,3,6,7,8-Hexachlorodibenzofuran pg/g	72918-21-9 1,2,3,7,8,9-Hexachlorodibenzofuran pg/g	60851-34-5 2,3,4,6,7,8-Hexachlorodibenzofuran pg/g	67562-39-4 1,2,3,4,6,7,8-Heptachlorodibenzofuran pg/g
Subsurface Sediment Samples																
C332	LW2-C332-B	12.254	12.191	1.008	2.722	58.729	634.803	9.968	64.669	32.611	24.057	45.146	19.823	0.153 U	8.156	65.728
C332	LW2-C332-C	0.029 U	0.023 J	0.008 U	0.038 J	0.399 J	3.416	0.03 J	0.181	0.065 J	0.042 J	0.116 J	0.047 J	0.009 U	0.103 J	0.376 J
C333	LW2-C333-B	0.146 U	0.227 J	0.157 J	0.697 J	16.927	125.6	0.808	6.296	10.585	3.269	19.24	4.338	0.065 U	0.697 J	8.279
C333	LW2-C333-C	0.003 U	0.006 U	0.004 U	0.004 U	0.941	14.261	0.024 J	0.034 U	0.043 J	0.025 J	0.074 U	0.021 U	0.008 U	0.061 J	0.205 J
C333	LW2-C333-E	0.192	0.004 U	0.004 U	0.013 J	0.098 J	1.364	0.008 J	0.056 U	0.003 U	0.003 U	0.014 J	0.004 U	0.004 U	0.004 U	0.021 U
C334	LW2-C334-B	42.212	58.293	3.872	8.292	58.317	324.433	30.998	203.81	243.423	88.395	93.841	48.082	2.392	27.563	88.609
C334	LW2-C334-C	2.08 T	1.68 T	0.1 JT	0.267 JT	2.03 T	14 T	0.856 JT	7.62 T	3.62 JT	2.68 T	14.5 JT	4.17 JT	0.282 JT	1.25 JT	9.87 JT
C335	LW2-C335-B	1.66	1.199	0.327 J	0.023 U	31.919	209.867	1.792	44.889	60.592 U	20.196	179.513	36.253	0.088 U	5.683	57.712
C335	LW2-C335-C	1.674	0.681 J	0.158 J	0.279 U	10.312	54.561	0.786 J	29.166	12.477	8.047	12.536	3.088	0.048 U	1.377	8.01
C351	LW2-C351-B	0.193 J	0.017 U	3.91 U	8.931	224.298	1763.25 J	5.021	155.287	260.918 U	114.654	464.247	149.333	5.452 J	25.015	241.889
C351	LW2-C351-C	0.01 U	0.007 U	0.009 U	0.009 U	0.491 U	3.527 U	0.01 U	0.445 U	0.191 J	0.12 J	0.339 U	0.12 J	0.008 U	0.043 J	0.216 U
C351	LW2-C351-D	0.008 UT	0.005 UT	0.006 UT	0.006 UT	0.107 UT	0.642 UT	0.007 UT	0.013 UT	0.024 JT	0.005 UT	0.023 UT	0.005 UT	0.005 UT	0.005 UT	0.007 UT
C351	LW2-C351-E	0.007 U	0.006 U	0.005 U	0.083 J	0.419 U	1.849 U	0.006 U	0.008 U	0.004 U	0.005 U	0.018 U	0.003 U	0.004 U	0.003 U	0.007 U
C372	LW2-C372-B	0.047 U	0.063 U	0.058 J	0.202 J	6.252	75.951	0.438 J	0.126 U	0.111 J	0.231 J	0.721 U	1.074	0.026 U	0.771 U	14.953
C372	LW2-C372-C	0.011 U	0.035 U	0.023 U	0.15 J	3.048	39.434	0.251 U	0.165 U	0.034 U	0.093 J	0.234 U	0.915	0.02 U	0.433 U	11.288
C377	LW2-C377-B	0.045 J	0.045 U	0.066 J	0.26 J	7.78	61.705	0.371 J	0.494	0.424 J	0.191 J	0.745 U	0.261 J	0.03 U	0.149 J	1.53 U
C377	LW2-C377-C	0.067 J	0.132 J	0.133 U	0.548 J	20.044	187.547	1.126	2.318	1.629	1.002 J	2.695	0.852 J	0.044 J	0.449 J	4.505
C377	LW2-C377-E	0.297	1.461	0.033 U	2.512	59.379	635.86 J	6.169	6.994	10.948	4.628	23.75	12.285	3.79	4.816	235.108
C397	LW2-C397-B	0.166 J	0.341 J	0.504 J	0.009 U	91.404	983.527	3.675	0.749	0.387 J	0.475 J	2.613	1.539 J	0.074 J	1.334 J	28.713
C397	LW2-C397-C	0.367	0.575 J	0.851 J	2.321	113.383	1262.895 J	5.744	0.691 U	0.546 J	0.687 J	3.368	2.108	0.103 J	1.206	30.911
C397	LW2-C397-D	0.061 U	0.126 J	0.114 J	0.414 J	16.464	212.372	0.978 J	0.227 U	0.1 U	0.17 U	0.614 J	1.079 J	0.014 U	0.706 J	12.328
C403	LW2-C403-B	0.017 U	0.042 J	0.02 J	0.102 J	2.69 U	34.433	0.24 J	0.087 U	0.042 J	0.066 U	0.153 U	0.333 J	0.011 U	0.246 J	4.572
C403	LW2-C403-C	0.016 U	0.011 U	0.012 U	0.012 U	0.143 U	1.205 U	0.013 U	0.02 U	0.006 U	0.007 U	0.016 U	0.008 U	0.009 U	0.008 U	0.055 U
C403	LW2-C403-D	0.026 U	0.01 U	0.009 U	0.01 U	0.134 U	1.154 U	0.011 U	0.021 U	0.009 U	0.01 U	0.007 U	0.007 U	0.009 U	0.008 U	0.012 U
C420	LW2-C420-B	0.032 U	0.056 J	0.061 J	0.325 J	15.763	203.332	0.622 J	0.435	0.179 J	0.142 J	0.712 U	0.583 J	0.069 U	0.329 J	4.161 U
C420	LW2-C420-C	0.021 U	0.035 U	0.032 U	0.166 J	6.073	61.03	0.421 J	0.342 U	0.084 J	0.106 J	0.591 U	0.416 J	0.023 U	0.24 J	3.146
C426	LW2-C426-B	0.09 U	0.129 J	0.238 J	0.728 J	31.444	470.973	1.686	0.275	0.22 J	0.176 U	0.711 J	0.89 J	0.075 U	0.61 J	8.998
C426	LW2-C426-C	0.039 UT	0.042 UT	0.035 UT	0.037 UT	0.883 JT	9.51 T	0.037 UT	0.031 UT	0.027 UT	0.028 UT	0.031 UT	0.032 UT	0.041 UT	0.034 UT	0.18 JT
C437	LW2-C437-B	0.019 U	0.019 U	0.042 U	0.164 J	6.184	72.055	0.354 J	0.056 U	0.021 U	0.058 J	0.16 U	0.236 J	0.017 U	0.161 J	2.34
C437	LW2-C437-C	0.016 U	0.015 U	0.009 U	0.01 U	0.113 U	0.861 U	0.01 U	0.017 U	0.011 U	0.012 U	0.008 U	0.009 U	0.009 U	0.01 U	0.013 U
C437	LW2-C437-D	0.014 U	0.012 U	0.01 U	0.011 U	0.073 U	0.476 U	0.012 U	0.017 U	0.007 U	0.008 U	0.007 U	0.007 U	0.009 U	0.008 U	0.011 U
C450	LW2-C450-B	0.124 U	0.038 J	0.068 J	0.253 J	14.214	371.827	0.438 J	0.127 U	0.017 U	0.052 J	0.174 U	0.088 J	0.027 U	0.1 J	2.402
C450	LW2-C450-C	0.936	0.362 J	0.378 J	1.645 J	112.668	1462.611 J	3.465 J	0.542	0.325 J	0.467 J	1.378 J	0.861 J	0.06 U	0.943 J	20.936
C454	LW2-C454-B	0.012 U	0.053 U	0.036 J	0.166 U	6.781	89.991	0.354 J	0.071 U	0.059 J	0.091 U	0.208 J	0.336 J	0.02 U	0.288 J	4.569
C454	LW2-C454-C	0.055 J	0.209 J	0.111 U	0.576 J	24.999	593.583	1.859	0.152 J	0.419 J	0.535 J	0.973 J	5.746	0.022 U	1.609	60.309
C454	LW2-C454-D	0.025 U	0.174 J	0.104 J	0.519 J	14.957	255.977	1.331	0.146 J	0.427 J	0.508 J	0.737 J	7.218	0.035 U	1.572	43.584
C454	LW2-C454-E	0.015 U	0.016 U	0.023 U	0.025 U	1.609	26.951	0.122 J	0.053 U	0.036 U	0.076 J	0.103 J	0.515 J	0.021 U	0.118 U	2.521
C474	LW2-C474-B	0.024 U	0.049 J	0.068 J	0.213 J	8.397	70.258	0.343 J	0.166 U	0.037 U	0.061 J	0.145 J	0.071 J	0.01 U	0.104 J	1.44
C474	LW2-C474-C	0.019 UT	0.025 UT	0.045 JT	0.145 JT	5.35 T	45.9 T	0.278 JT	0.151 UT	0.025 JT	0.0325 JT	0.093 UT	0.059 JT	0.007 UT	0.061 UT	1.04 JT

Table 4-12. Dioxin, Furan, and PCB Concentrations Used in 2, 3, 7, 8 – TCDD TEQ Value Calculations for Beach, Surface, and Subsurface Sediment Samples.

	CAS No Chemical Name Unit	55673-89-7 1,2,3,4,7,8,9-Heptachlorodibenzofuran pg/g	39001-02-0 Octachlorodibenzofuran pg/g	32598-13-3 3,3',4,4'-Tetrachlorobiphenyl pg/g	70362-50-4 3,4,4',5-Tetrachlorobiphenyl pg/g	57465-28-8 3,3',4,4',5-Pentachlorobiphenyl pg/g	32774-16-6 3,3',4,4',5,5'-Hexachlorobiphenyl pg/g	74472-37-0 2,3,4,4',5-Pentachlorobiphenyl pg/g	PCB106_118 PCB106 & 118 pg/g	65510-44-3 2,3',4,4',5'-Pentachlorobiphenyl pg/g	38380-08-4 2,3,3',4,4',5-Hexachlorobiphenyl pg/g	69782-90-7 2,3,3',4,4',5'-Hexachlorobiphenyl pg/g	52663-72-6 2,3',4,4',5,5'-Hexachlorobiphenyl pg/g	39635-31-9 2,3,3',4,4',5,5'-Heptachlorobiphenyl pg/g	32598-14-4 2,3,3',4,4'-Pentachlorobiphenyl pg/g	2,3,7,8-TCDD TEQ pg/g
Location	**Sample ID**															
Subsurface Sediment Samples																
C332	LW2-C332-B	8.275	86.57													54.7 T
C332	LW2-C332-C	0.02 J	0.29 J													0.107 JT
C333	LW2-C333-B	2.929	15.14													5.91 JT
C333	LW2-C333-C	0.055 J	0.945 J													0.0367 JT
C333	LW2-C333-E	0.01 U	0.097 J													0.197 JT
C334	LW2-C334-B	16.333	157.486													200 T
C334	LW2-C334-C	2.87 JT	7.13 JT													8.34 JT
C335	LW2-C335-B	23.351	72.049													41 JT
C335	LW2-C335-C	2.593	16.257													11.9 JT
C351	LW2-C351-B	99.977	351.1													145 JT
C351	LW2-C351-C	0.082 J	0.476 U													0.0867 JT
C351	LW2-C351-D	0.009 UT	0.011 UT													0.0012 JT
C351	LW2-C351-E	0.009 U	0.008 U													0.0083 JT
C372	LW2-C372-B	0.071 U	8.916													0.519 JT
C372	LW2-C372-C	0.06 U	3.164 U													0.3 JT
C377	LW2-C377-B	0.361 J	5.809													0.41 JT
C377	LW2-C377-C	0.598 J	12.012													1.86 JT
C377	LW2-C377-E	4.423	129.224													13.7 JT
C397	LW2-C397-B	1.677 J	101.835													3.14 JT
C397	LW2-C397-C	1.919 J	99.506													4.48 JT
C397	LW2-C397-D	0.37 J	21.7													0.832 JT
C403	LW2-C403-B	0.074 J	3.404 U													0.188 JT
C403	LW2-C403-C	0.012 U	0.041 U													0 UT
C403	LW2-C403-D	0.015 U	0.023 U													0 UT
C420	LW2-C420-B	0.936 J	10.184													0.56 JT
C420	LW2-C420-C	0.451 J	4.226 U													0.284 JT
C426	LW2-C426-B	0.455 J	22.259													1.11 JT
C426	LW2-C426-C	0.04 UT	0.49 JT													0.0116 JT
C437	LW2-C437-B	0.088 J	4.025 U													0.214 JT
C437	LW2-C437-C	0.016 U	0.026 U													0 UT
C437	LW2-C437-D	0.015 U	0.019 U													0 UT
C450	LW2-C450-B	0.073 J	10.724													0.364 JT
C450	LW2-C450-C	0.857 J	123.702													3.97 JT
C454	LW2-C454-B	0.092 U	10.327													0.249 JT
C454	LW2-C454-C	0.46 J	33.172													2.56 JT
C454	LW2-C454-D	0.41 U	22.174													2.23 JT
C454	LW2-C454-E	0.049 U	1.261 J													0.156 JT
C474	LW2-C474-B	0.086 J	4.966 U													0.28 JT
C474	LW2-C474-C	0.047 JT	2.065 UT													0.139 JT

Notes:

1. 2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) toxicity equivalent (TEQ) values were calculated with World Health Organization 1997 TEFs for mammals, as was done for the Round 1 data (see Appendix C, Integral 2004b) .
2. Shaded cells indicate 2,3,7,8-TCDD TEQ Values that include coplanar PCB congener data.

J The associated numerical value is an estimated quantity.

T The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.

U The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

Table 4-13. Subsurface Sediment Sample Groupings Based on Interval End Depths.

Subsurface Sample Depth Group											
23-199 cm bml				200-399 cm bml				400-574 cm bml			
Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)
30	153	LW2-C009-B	123	153	273	LW2-C009-C	120	467	505	LW2-C011-F1	38
30	127	LW2-C011-B1	97	127	212	LW2-C011-C1	85	381	499	LW2-C011-G2	118
30	91	LW2-C011-B2	61	212	341	LW2-C011-D1	129	363	485	LW2-C019-E2	122
91	137	LW2-C011-C2	46	199	256	LW2-C011-E2	57	344	454	LW2-C025-E2	110
137	199	LW2-C011-D2	62	107	210	LW2-C015-C	103	310	440	LW2-C038-E	130
30	107	LW2-C015-B	77	210	270	LW2-C015-D	60	490	574	LW2-C064-G	84
30	86	LW2-C019-B1	56	270	343	LW2-C015-E	73	518	573	LW2-C066-F	55
86	175	LW2-C019-C1	89	175	264	LW2-C019-D1	89	275	400	LW2-C067-D	125
30	102	LW2-C020-B	72	179	232	LW2-C020-D	53	400	475	LW2-C067-E	75
102	179	LW2-C020-C	77	152	277	LW2-C022-C	125	410	470	LW2-C074-F	60
30	152	LW2-C022-B	122	277	327	LW2-C022-D	50	454	540	LW2-C105-F	86
30	78	LW2-C025-B1	48	288	344	LW2-C025-D2	56	369	420	LW2-C111-E2	51
78	198	LW2-C025-C1	120	288	344	LW2-C025-D2	56	426	488	LW2-C111-F	62
30	150	LW2-C027-B	120	150	249	LW2-C027-C	99	274	425	LW2-C112-D	151
30	75	LW2-C034-B	45	249	368	LW2-C027-D	119	351	400	LW2-C130-F	49
75	128	LW2-C034-C	53	188	223	LW2-C034-E	35	349	401	LW2-C144-E	52
30	154	LW2-C038-B	124	223	343	LW2-C034-F	120	398	503	LW2-C147-E	105
30	120	LW2-C060-B	90	154	252	LW2-C038-C	98	338	418	LW2-C164-E	80
30	77	LW2-C061-B	47	252	310	LW2-C038-D	58	410	504	LW2-C176-G	94
77	151	LW2-C061-C	74	120	241	LW2-C060-C	121	398	521	LW2-C184-E	123
30	145	LW2-C062-B	115	276	312	LW2-C061-E	36	440	490	LW2-C199-E	50
30	120	LW2-C064-B	90	145	261	LW2-C062-C	116	369	509	LW2-C210-E	140
30	153	LW2-C066-B	123	261	340	LW2-C062-D	79	330	458	LW2-C245-F	128
30	153	LW2-C067-B	123	120	244	LW2-C064-C	124	319	445	LW2-C247-E	126
30	100	LW2-C073-B	70	153	275	LW2-C066-C	122	509	541	LW2-C269-F	32
30	89	LW2-C074-B	59	100	206	LW2-C073-C	106	380	430	LW2-C283-E	50
65	110	LW2-C077-C	45	206	295.5	LW2-C073-D	89.5	428	516	LW2-C301-G	88
30	130	LW2-C086-B	100	89	212	LW2-C074-C	123	398	533	LW2-C311-E	135
30	134	LW2-C093-B	104	212	333	LW2-C074-D	121	346	490	LW2-C331-G	144
30	152	LW2-C105-B	122	110	255	LW2-C077-D	145	421	464	LW2-C366-G1	43
30	153	LW2-C111-B	123	130	250	LW2-C086-C	120	369	495	LW2-C371-E	126
30	140	LW2-C111-B2	110	250	341	LW2-C086-D	91	369	482	LW2-C377-E	113
30	152	LW2-C112-B	122	134	256	LW2-C093-C	122	367	504	LW2-C401-F	137
30	152	LW2-C121-B	122	256	341	LW2-C093-D	85	483	533	LW2-C403-F	50
30	152	LW2-C122-B	122	152	280	LW2-C105-C	128	400	520	LW2-C430-E	120
152	192	LW2-C122-C	40	153	250	LW2-C111-C	97	394	475	LW2-C437-F	81
30	76	LW2-C130-B	46	140	256	LW2-C111-C2	116	395	530	LW2-C445-E	135
76	187	LW2-C130-C	111	152	274	LW2-C112-C	122	360	448	LW2-C454-H	88
30	152	LW2-C133-B	122	152	242	LW2-C121-C	90	430	494	LW2-C455-F	64
30	77	LW2-C135-B	47	242	369	LW2-C121-D	127	377	414	LW2-C456-F	37
30	137	LW2-C136-B	107	187	236	LW2-C130-D	49				
30	71	LW2-C138-B	41	236	351	LW2-C130-E	115				
71	145	LW2-C138-C	74	272	368	LW2-C133-D	96				

Table 4-13. Subsurface Sediment Sample Groupings Based on Interval End Depths.

Subsurface Sample Depth Group											
23-199 cm bml				200-399 cm bml				400-574 cm bml			
Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)
30	60	LW2-C139-B	30	77	205	LW2-C135-C	128				
60	170	LW2-C139-C	110	205	333	LW2-C135-D	128				
30	152	LW2-C142-B	122	137	256	LW2-C136-C	119				
30	151	LW2-C144-B	121	256	394	LW2-C136-D	138				
30	151	LW2-C147-B	121	145	214	LW2-C138-D	69				
30	61	LW2-C148-B	31	170	267	LW2-C139-D	97				
61	183	LW2-C148-C	122	152	261	LW2-C142-C	109				
30	149	LW2-C152-B	119	151	244	LW2-C144-C	93				
30	152	LW2-C155-B	122	244	349	LW2-C144-D	105				
30	152	LW2-C156-B	122	151	275	LW2-C147-C	124				
30	152	LW2-C157-B	122	238	367	LW2-C148-E	129				
30	153	LW2-C158-B	123	149	220	LW2-C152-C	71				
30	121	LW2-C160-B	91	255	380	LW2-C152-E	125				
30	150	LW2-C161-B	120	152	246	LW2-C155-C	94				
30	122	LW2-C162-B	92	246	373	LW2-C155-D	127				
30	65	LW2-C163-B1	35	152	285	LW2-C156-C	133				
30	81	LW2-C163-B2	51	351	378	LW2-C156-F	27				
65	186	LW2-C163-C1	121	152	250	LW2-C157-C	98				
30	152	LW2-C164-B	122	153	276	LW2-C158-C	123				
30	95	LW2-C166-B	65	276	308	LW2-C158-D	32				
30	140	LW2-C169-B	110	308	386	LW2-C158-E	78				
30	120	LW2-C170-B	90	121	243	LW2-C160-C	122				
30	154	LW2-C171-B	124	150	278	LW2-C161-C	128				
30	112	LW2-C172-B	82	278	300	LW2-C161-D	22				
30	112	LW2-C173-B	82	122	275	LW2-C162-C	153				
30	94	LW2-C176-B	64	275	394	LW2-C162-D	119				
94	165	LW2-C176-C	71	81	207	LW2-C163-C2	126				
30	151	LW2-C179-B	121	186	278	LW2-C163-D1	92				
30	160	LW2-C182-B	130	207	344	LW2-C163-D2	137				
30	153	LW2-C184-B	123	152	272	LW2-C164-C	120				
30	153	LW2-C185-B	123	95	215	LW2-C166-C	120				
30	132	LW2-C192-B	102	215	337	LW2-C166-D	122				
30	127	LW2-C196-B	97	140	262	LW2-C169-C	122				
127	151	LW2-C196-C	24	262	348	LW2-C169-D	86				
30	136	LW2-C197-B	106	120	202.5	LW2-C170-C	82.5				
30	172	LW2-C199-B	142	202.5	308.5	LW2-C170-D	106				
30	152	LW2-C202-B	122	154	272	LW2-C171-C	118				
152	188	LW2-C202-C	36	272	382	LW2-C171-D	110				
30	92	LW2-C203-B	62	112	220	LW2-C172-C	108				
30	137	LW2-C206-B	107	309	361	LW2-C172-E	52				
30	159	LW2-C207-B	129	112	216	LW2-C173-C	104				
30	143	LW2-C207-B2	113	322	370	LW2-C173-E	48				
30	153	LW2-C210-B	123	151	275	LW2-C179-C	124				

Table 4-13. Subsurface Sediment Sample Groupings Based on Interval End Depths.

Subsurface Sample Depth Group											
23-199 cm bml				200-399 cm bml				400-574 cm bml			
Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)
30	148	LW2-C213-B	118	275	346	LW2-C179-D	71				
30	119.5	LW2-C215-B	89.5	160	283	LW2-C182-C	123				
30	135	LW2-C220-B	105	283	337	LW2-C182-D	54				
30	150	LW2-C221-B	120	153	275	LW2-C184-C	122				
30	154	LW2-C228-B	124	275	398	LW2-C184-D	123				
30	91	LW2-C231-B	61	153	246	LW2-C185-C	93				
91	162	LW2-C231-C	71	246	330	LW2-C185-D	84				
30	159	LW2-C232-B	129	132	249	LW2-C192-C	117				
30	79	LW2-C240-B	49	249	282	LW2-C192-D	33				
30	133	LW2-C244-B	103	136	203	LW2-C197-C	67				
30	110	LW2-C245-B	80	203	259	LW2-C197-D	56				
110	173	LW2-C245-C	63	259	366	LW2-C197-E	107				
30	63	LW2-C247-B	33	172	301	LW2-C199-C	129				
63	181	LW2-C247-C	118	188	304	LW2-C202-D	116				
30	154	LW2-C252-B	124	92	214	LW2-C203-C	122				
30	74	LW2-C254-B	44	246	310	LW2-C203-E	64				
74	104	LW2-C254-C	30	137	269	LW2-C206-C	132				
30	152	LW2-C255-B	122	269	332	LW2-C206-D	63				
30	85	LW2-C257-B	55	159	255	LW2-C207-C	96				
30	153	LW2-C258-B	123	143	281	LW2-C207-C2	138				
30	114	LW2-C260-B	84	255	331	LW2-C207-D	76				
114	163	LW2-C260-C	49	153	274	LW2-C210-C	121				
163	195	LW2-C260-D	32	148	205	LW2-C213-C	57				
30	152	LW2-C263-B	122	205	330	LW2-C213-D	125				
30	156	LW2-C264-B	126	119.5	241.5	LW2-C215-C	122				
30	131	LW2-C266-B	101	135	220	LW2-C220-C	85				
30	88	LW2-C267-B	58	150	207	LW2-C221-C	57				
30	151	LW2-C268-B	121	207	292	LW2-C221-D	85				
30	151	LW2-C269-B	121	159	221	LW2-C232-C	62				
30	87	LW2-C270-B	57	113	230	LW2-C240-D	117				
87	182	LW2-C270-C	95	230	312	LW2-C240-E	82				
30	152	LW2-C272-B	122	133	270	LW2-C244-C	137				
30	153	LW2-C273-B	123	173	202	LW2-C245-D	29				
30	153	LW2-C276-B	123	202	330	LW2-C245-E	128				
30	152	LW2-C277-B	122	181	319	LW2-C247-D	138				
30	152	LW2-C278-B	122	154	252	LW2-C252-C	98				
30	137	LW2-C280-B	107	252	297	LW2-C252-D	45				
30	155	LW2-C282-B	125	152	238	LW2-C255-C	86				
30	151	LW2-C283-B	121	153	276	LW2-C258-C	123				
30	104	LW2-C284-B	74	276	304	LW2-C258-D	28				
104	183	LW2-C284-C	79	152	277	LW2-C263-C	125				
30	153	LW2-C288-B	123	277	376	LW2-C263-D	99				
30	155	LW2-C289-B	125	156	220	LW2-C264-C	64				

Table 4-13. Subsurface Sediment Sample Groupings Based on Interval End Depths.

Subsurface Sample Depth Group											
23-199 cm bml				200-399 cm bml				400-574 cm bml			
Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)
30	92	LW2-C290-B	62	220	290	LW2-C264-D	70				
30	152	LW2-C291-B	122	131	276	LW2-C266-C	145				
30	151	LW2-C293-B	121	88	211	LW2-C267-C	123				
30	152	LW2-C293-B2	122	151	252	LW2-C268-C	101				
30	152	LW2-C294-B	122	151	272	LW2-C269-C	121				
30	153	LW2-C295-B	123	152	260	LW2-C272-C	108				
30	104	LW2-C299-B	74	153	274	LW2-C273-C	121				
30	152	LW2-C300-B	122	274	355	LW2-C273-D	81				
30	153	LW2-C301-B	123	153	268	LW2-C276-C	115				
32	198	LW2-C302-B	166	268	319	LW2-C276-D	51				
30	160	LW2-C305-B1	130	152	273	LW2-C277-C	121				
30	151	LW2-C305-B2	121	273	341	LW2-C277-D	68				
30	153	LW2-C311-B	123	152	288	LW2-C278-C	136				
30	151	LW2-C313-B	121	288	350	LW2-C278-D	62				
30	132	LW2-C314-B	102	137	267	LW2-C280-C	130				
30	169	LW2-C316-B	139	267	321	LW2-C280-D	54				
30	119	LW2-C323-B	89	155	248	LW2-C282-C	93				
119	198	LW2-C323-C	79	248	344	LW2-C282-D	96				
30	91	LW2-C324-B	61	151	258	LW2-C283-C	107				
30	61	LW2-C326-B	31	183	292	LW2-C284-D	109				
61	98	LW2-C326-C	37	292	353	LW2-C284-E	61				
98	178	LW2-C326-D	80	153	274	LW2-C288-C	121				
30	101	LW2-C327-B	71	274	389	LW2-C288-D	115				
101	174	LW2-C327-C	73	155	206	LW2-C289-C	51				
30	152	LW2-C329-B	122	249	336	LW2-C289-E	87				
30	94	LW2-C331-B	64	92	209	LW2-C290-C	117				
94	137	LW2-C331-C	43	152	289	LW2-C291-C	137				
30	170	LW2-C332-B	140	151	272	LW2-C293-C	121				
30	103	LW2-C333-B	73	152	218	LW2-C293-C2	66				
103	153	LW2-C333-C	50	272	347	LW2-C293-D	75				
30	110	LW2-C334-B	80	218	328	LW2-C293-D2	110				
30	70	LW2-C335-B	40	152	272	LW2-C294-C	120				
70	127	LW2-C335-C	57	272	376	LW2-C294-D	104				
30	135	LW2-C341-B	105	153	256	LW2-C295-C	103				
30	152	LW2-C342-B	122	104	230	LW2-C299-C	126				
30	153	LW2-C346-B	123	152	204	LW2-C300-C	52				
30	70	LW2-C347-B	40	204	278	LW2-C300-D	74				
70	138	LW2-C347-C	68	153	231	LW2-C301-C	78				
30	153	LW2-C348-B	123	231	358	LW2-C301-D	127				
30	62	LW2-C349-B	32	358	398	LW2-C301-E	40				
62	159	LW2-C349-C	97	198	288	LW2-C302-C	90				
30	80	LW2-C351-B	50	288	348	LW2-C302-D	60				
30	152	LW2-C352-B	122	160	220	LW2-C305-C1	60				

Table 4-13. Subsurface Sediment Sample Groupings Based on Interval End Depths.

Subsurface Sample Depth Group											
23-199 cm bml				200-399 cm bml				400-574 cm bml			
Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)
30	136	LW2-C356-B	106	151	240	LW2-C305-C2	89				
30	142	LW2-C357-B	112	220	330	LW2-C305-D1	110				
142	192	LW2-C357-C	50	240	286	LW2-C305-D2	46				
30	152	LW2-C359-B	122	153	276	LW2-C311-C	123				
30	155	LW2-C361-B	125	151	306	LW2-C313-C	155				
30	152	LW2-C362-B	122	132	243	LW2-C314-C	111				
30	75	LW2-C364-B	45	243	336	LW2-C314-D	93				
75	183	LW2-C364-C	108	169	268	LW2-C316-C	99				
30	109	LW2-C366-B1	79	268	339	LW2-C316-D	71				
30	100	LW2-C366-B2	70	198	321	LW2-C323-D	123				
30	136	LW2-C368-B	106	321	351	LW2-C323-E	30				
30	162	LW2-C371-B	132	137	216	LW2-C324-D	79				
30	94	LW2-C372-B	64	216	328	LW2-C324-E	112				
94	141	LW2-C372-C	47	174	301	LW2-C327-D	127				
30	155	LW2-C373-B	125	152	274	LW2-C329-C	122				
30	153	LW2-C377-B	123	274	359	LW2-C329-D	85				
30	152	LW2-C379-B	122	137	237	LW2-C331-D	100				
152	196	LW2-C379-C	44	237	280	LW2-C331-E	43				
30	153	LW2-C380-B	123	170	243	LW2-C332-C	73				
30	153	LW2-C382-B	123	243	289	LW2-C332-D	46				
30	63	LW2-C383-B	33	203	294	LW2-C333-E	91				
63	160	LW2-C383-C	97	322	357	LW2-C333-G	35				
30	128	LW2-C384-B	98	110	214	LW2-C334-C	104				
30	172	LW2-C386-B	142	214	308	LW2-C334-D	94				
30	154	LW2-C388-B	124	248	336	LW2-C335-E	88				
30	76	LW2-C392-B	46	152	210	LW2-C342-C	58				
76	199	LW2-C392-C	123	210	280	LW2-C342-D	70				
30	152	LW2-C393-B	122	280	333	LW2-C342-E	53				
30	153	LW2-C396-B	123	153	284	LW2-C346-C	131				
30	153	LW2-C397-B	123	284	345	LW2-C346-D	61				
30	153	LW2-C400-B	123	279	378	LW2-C347-F	99				
30	69	LW2-C401-B	39	153	240	LW2-C348-C	87				
69	188	LW2-C401-C	119	240	369	LW2-C348-D	129				
30	65	LW2-C402-B	35	159	307	LW2-C349-D	148				
65	183	LW2-C402-C	118	80	212	LW2-C351-C	132				
30	153	LW2-C403-B	123	212	335	LW2-C351-D	123				
30	134	LW2-C405-B	104	335	399	LW2-C351-E	64				
134	171	LW2-C405-C	37	152	207	LW2-C352-C	55				
30	72	LW2-C409-B	42	207	251	LW2-C352-D	44				
72	192	LW2-C409-C	120	136	256	LW2-C356-C	120				
30	158	LW2-C413-B1	128	305	336	LW2-C356-E	31				
30	152	LW2-C413-B2	122	192	241	LW2-C357-D	49				
23	152	LW2-C415-B	129	152	257	LW2-C359-C	105				

Table 4-13. Subsurface Sediment Sample Groupings Based on Interval End Depths.

Subsurface Sample Depth Group											
23-199 cm bml				200-399 cm bml				400-574 cm bml			
Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)
30	152	LW2-C417-B	122	257	378	LW2-C359-D	121				
30	152	LW2-C420-B	122	152	219	LW2-C362-C	67				
30	61	LW2-C421-B	31	219	316	LW2-C362-D	97				
61	123	LW2-C421-C	62	109	217	LW2-C366-C1	108				
30	165	LW2-C425-B1	135	100	202	LW2-C366-C2	102				
30	102	LW2-C425-B2	72	217	255	LW2-C366-D1	38				
30	132	LW2-C426-B	102	202	288	LW2-C366-D2	86				
30	155	LW2-C430-B	125	255	316	LW2-C366-E1	61				
30	131	LW2-C431-B	101	348	388	LW2-C366-F2	40				
131	175	LW2-C431-C	44	136	241	LW2-C368-C	105				
30	144	LW2-C434-B	114	241	294	LW2-C368-D	53				
144	175	LW2-C434-C	31	294	375	LW2-C368-E	81				
30	85	LW2-C436-B	55	162	275	LW2-C371-C	113				
30	126	LW2-C437-B	96	263	363	LW2-C372-E	100				
30	153	LW2-C439-B	123	155	278	LW2-C373-C	123				
153	199	LW2-C439-C	46	153	273	LW2-C377-C	120				
30	123	LW2-C440-B	93	196	318	LW2-C379-D	122				
30	156	LW2-C441-B1	126	153	275	LW2-C380-C	122				
30	147	LW2-C441-B2	117	153	284	LW2-C382-C	131				
30	152	LW2-C444-B	122	284	390	LW2-C382-D	106				
30	160	LW2-C445-B	130	160	266	LW2-C383-D	106				
30	112	LW2-C447-B	82	128	207	LW2-C384-C	79				
112	189	LW2-C447-C	77	334	357	LW2-C384-F	23				
30	152	LW2-C448-B	122	172	295	LW2-C386-C	123				
30	148	LW2-C450-B	118	154	276	LW2-C388-C	122				
30	152	LW2-C453-B	122	199	337	LW2-C392-D	138				
30	68	LW2-C454-B	38	152	282	LW2-C393-C	130				
68	101	LW2-C454-C	33	153	277	LW2-C396-C	124				
30	152	LW2-C455-B	122	153	271	LW2-C397-C	118				
30	137	LW2-C456-B	107	271	341	LW2-C397-D	70				
30	108	LW2-C457-B	78	153	280	LW2-C400-C	127				
108	173	LW2-C457-C	65	280	354	LW2-C400-D	74				
30	151	LW2-C458-B	121	188	278	LW2-C401-D	90				
30	152	LW2-C458-B2	122	278	367	LW2-C401-E	89				
30	152	LW2-C461-B	122	183	252	LW2-C402-D	69				
30	152	LW2-C462-B	122	153	242	LW2-C403-C	89				
30	152	LW2-C468-B	122	242	361	LW2-C403-D	119				
30	152	LW2-C471-B	122	292	328	LW2-C405-E	36				
30	152	LW2-C474-B	122	158	299	LW2-C413-C1	141				
30	123	LW2-C477-B	93	152	274	LW2-C413-C2	122				
30	118	LW2-C494-B	88	274	349	LW2-C413-D2	75				
30	99	LW2-C521-B	69	152	239	LW2-C415-C	87				
99	182	LW2-C521-C	83	239	314	LW2-C415-D	75				

Table 4-13. Subsurface Sediment Sample Groupings Based on Interval End Depths.

Subsurface Sample Depth Group											
23-199 cm bml				200-399 cm bml				400-574 cm bml			
Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)
				298	353	LW2-C417-D	55				
				152	214	LW2-C420-C	62				
				214	263	LW2-C420-D	49				
				165	217	LW2-C425-C1	52				
				102	253	LW2-C425-C2	151				
				253	300	LW2-C425-D2	47				
				257	295	LW2-C425-E1	38				
				295	324	LW2-C425-F1	29				
				135	220	LW2-C426-C	85				
				220	371	LW2-C426-D	151				
				155	278	LW2-C430-C	123				
				175	281	LW2-C431-D	106				
				175	250	LW2-C434-D	75				
				85	217	LW2-C436-C	132				
				126	245	LW2-C437-C	119				
				245	317	LW2-C437-D	72				
				321	328	LW2-C439-E	7				
				123	254	LW2-C440-C	131				
				156	272	LW2-C441-C1	116				
				147	272	LW2-C441-C2	125				
				272	363	LW2-C441-D1	91				
				272	375	LW2-C441-D2	103				
				152	206	LW2-C444-C	54				
				263	388	LW2-C444-E	125				
				160	283	LW2-C445-C	123				
				189	239	LW2-C447-D	50				
				311	382	LW2-C447-F	71				
				152	272	LW2-C448-C	120				
				272	365	LW2-C448-D	93				
				148	245	LW2-C450-C	97				
				152	270	LW2-C453-C	118				
				270	382	LW2-C453-D	112				
				101	237	LW2-C454-D	136				
				237	274	LW2-C454-E	37				
				152	274	LW2-C455-C	122				
				274	395	LW2-C455-D	121				
				137	222	LW2-C456-C	85				
				222	254	LW2-C456-D	32				
				291	357	LW2-C457-E	66				
				151	273	LW2-C458-C	122				
				152	274	LW2-C458-C2	122				
				152	279	LW2-C461-C	127				
				152	275	LW2-C462-C	123				

Table 4-13. Subsurface Sediment Sample Groupings Based on Interval End Depths.

Subsurface Sample Depth Group											
23-199 cm bml				200-399 cm bml				400-574 cm bml			
Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)	Start Depth (cm bml)	End Depth (cm bml)	Sample ID	Interval thickness (cm)
				152	272	LW2-C468-C	120				
				152	274	LW2-C471-C	122				
				274	364	LW2-C471-D	90				
				152	275	LW2-C474-C	123				
				275	342	LW2-C474-D	67				
				123	208	LW2-C477-C	85				
				118	221	LW2-C494-C	103				
				221	338	LW2-C494-D	117				
				338	382	LW2-C494-E	44				
				280	315	LW2-C521-E	35				

Note:
bml - below mudline.

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

					Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	Depth Interval	Number of Samples	Number Detected	% Detected	Minimum	Maximum	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th
Conventionals (percent)														
Total solids (percent)	23 - 199 cm	257	257	100.0	32	92.3	62	59.3 T	80.5	32	92.3	62	59.3 T	80.5
Total solids (percent)	200 - 399 cm	309	309	100.0	48.8	90.9	68	68.6 T	80.4 T	48.8	90.9	68	68.6 T	80.4 T
Total solids (percent)	400 - 574 cm	35	35	100.0	55.9	76.8	68	68.8	76.4	55.9	76.8	68	68.8	76.4
Total organic carbon (percent)	23 - 199 cm	254	253	99.6	0.03 J	16	2	1.9	4.5	0.03 J	16	2	1.9	4.5
Total organic carbon (percent)	200 - 399 cm	237	230	97.0	0.03 J	35.5	2	1.59	4.75	0.02 U	35.5	1.9	1.56 T	4.75
Total organic carbon (percent)	400 - 574 cm	19	18	94.7	0.05	4.81	2	2.21	4.81	0.02 U	4.81	1.9	2.21	4.81
Specific Gravity (NA)	23 - 199 cm	254	254	100.0	1.2	2.55	1.7	1.58	2.1	1.2	2.55	1.7	1.58	2.1
Specific Gravity (NA)	200 - 399 cm	241	241	100.0	1.4	2.52	1.7	1.69	2.07	1.4	2.52	1.7	1.69	2.07
Specific Gravity (NA)	400 - 574 cm	21	21	100.0	1.54	2.05	1.7	1.65	1.95	1.54	2.05	1.7	1.65	1.95
Fines (percent)	23 - 199 cm	255	255	100.0	0.29 T	101 T	53	63.2 T	87.1 T	0.29 T	101 T	53	63.2 T	87.1 T
Fines (percent)	200 - 399 cm	240	240	100.0	0.31 T	95.9 T	46	49.4 T	85.5 T	0.31 T	95.9 T	46	49.4 T	85.5 T
Fines (percent)	400 - 574 cm	21	21	100.0	0.671 T	92.8 T	57	65.8 T	91 T	0.671 T	92.8 T	57	65.8 T	91 T
Metals (mg/kg)														
Aluminum (mg/kg)	23 - 199 cm	254	254	100.0	6500 J	38500	23000	23800	33500	6500 J	38500	23000	23800	33500
Aluminum (mg/kg)	200 - 399 cm	237	237	100.0	5960 J	40700	21000	19500	33200	5960 J	40700	21000	19500	33200
Aluminum (mg/kg)	400 - 574 cm	19	19	100.0	9480	34200 T	22000	22400	34200 T	9480	34200 T	22000	22400	34200 T
Antimony (mg/kg)	23 - 199 cm	254	158	62.2	0.07 J	17.5 J	1	0.3 JT	4.8 J	0.05 UJ	17.5 J	0.7	0.2 J	3.78 J
Antimony (mg/kg)	200 - 399 cm	237	101	42.6	0.07 J	18.2 J	1.1	0.24 J	5.45 J	0.04 UJ	18.2 J	0.52	0.14 UJ	1.13 J
Antimony (mg/kg)	400 - 574 cm	19	9	47.4	0.18 J	0.83 J	0.33	0.3 JT	0.83 J	0.07 UJ	0.83 J	0.22	0.18 J	0.83 J
Arsenic (mg/kg)	23 - 199 cm	254	254	100.0	0.8	44.5 J	4.8	4.04	9.28	0.8	44.5 J	4.8	4.04	9.28
Arsenic (mg/kg)	200 - 399 cm	237	237	100.0	1.06 J	32.3 J	3.9	3.48	6.26	1.06 J	32.3 J	3.9	3.48	6.26
Arsenic (mg/kg)	400 - 574 cm	19	19	100.0	2.15	8.37 T	4.3	4.22 J	8.37 T	2.15	8.37 T	4.3	4.22 J	8.37 T
Cadmium (mg/kg)	23 - 199 cm	254	249	98.0	0.05 J	4.36 J	0.37	0.313 J	0.768	0.05 J	4.36 J	0.37	0.306	0.768
Cadmium (mg/kg)	200 - 399 cm	237	235	99.2	0.034 J	7.03	0.3	0.218	0.635	0.034 J	7.03	0.29	0.217	0.635
Cadmium (mg/kg)	400 - 574 cm	19	19	100.0	0.057	0.779	0.4	0.394 J	0.779	0.057	0.779	0.4	0.394 J	0.779
Chromium (mg/kg)	23 - 199 cm	254	254	100.0	11.3	249 T	33	32.2	61.9	11.3	249 T	33	32.2	61.9
Chromium (mg/kg)	200 - 399 cm	237	237	100.0	9.29	175	30	28.2	50.5	9.29	175	30	28.2	50.5
Chromium (mg/kg)	400 - 574 cm	19	19	100.0	15	43.2 T	29	29.5	43.2 T	15	43.2 T	29	29.5	43.2 T
Copper (mg/kg)	23 - 199 cm	254	254	100.0	10.9	3290	64	40.2	121	10.9	3290	64	40.2	121
Copper (mg/kg)	200 - 399 cm	237	237	100.0	10.4	801	41	30.5	79.9	10.4	801	41	30.5	79.9
Copper (mg/kg)	400 - 574 cm	19	19	100.0	12	107	39	38.9	107	12	107	39	38.9	107
Lead (mg/kg)	23 - 199 cm	254	254	100.0	2.33	3330 J	48	24.9	107 J	2.33	3330 J	48	24.9	107 J
Lead (mg/kg)	200 - 399 cm	237	237	100.0	2.06	572	29	17.9	83.6	2.06	572	29	17.9	83.6
Lead (mg/kg)	400 - 574 cm	19	19	100.0	2.61	85.2 J	28	24.2	85.2 J	2.61	85.2 J	28	24.2	85.2 J
Mercury (mg/kg)	23 - 199 cm	254	252	99.2	0.009 JT	3.06	0.18	0.107	0.575	0.006 U	3.06	0.18	0.106 T	0.575
Mercury (mg/kg)	200 - 399 cm	237	220	92.8	0.007 J	4.14	0.2	0.092	0.635 J	0.007 J	4.14	0.19	0.083	0.635 J
Mercury (mg/kg)	400 - 574 cm	19	17	89.5	0.0135 JT	0.626 J	0.26	0.212	0.626 J	0.009 U	0.626 J	0.24	0.197	0.626 J
Nickel (mg/kg)	23 - 199 cm	254	254	100.0	10.6	67.6	25	25.1	36.3	10.6	67.6	25	25.1	36.3
Nickel (mg/kg)	200 - 399 cm	237	237	100.0	10.2	716	29	23.6	31.1	10.2	716	29	23.6	31.1
Nickel (mg/kg)	400 - 574 cm	19	19	100.0	14.4	29.8 T	23	24	29.8 T	14.4	29.8 T	23	24	29.8 T
Selenium (mg/kg)	23 - 199 cm	254	130	51.2	0.04 J	0.21	0.11	0.11	0.18 T	0.03 U	0.23 U	0.097	0.09	0.17
Selenium (mg/kg)	200 - 399 cm	237	94	39.7	0.04 J	0.23	0.11	0.1	0.2	0.04 J	0.25 UT	0.085	0.07 J	0.18
Selenium (mg/kg)	400 - 574 cm	19	1	5.3	0.09 J	0.09 J	0.09	0.09 J	0.09 J	0.04 UT	0.19 U	0.1	0.105 U	0.19 U
Silver (mg/kg)	23 - 199 cm	254	250	98.4	0.019 J	2.47	0.3	0.263	0.69	0.019 J	2.47	0.3	0.259	0.69
Silver (mg/kg)	200 - 399 cm	237	233	98.3	0.016 J	1.07	0.24	0.165	0.714	0.016 J	1.07	0.24	0.161 T	0.714
Silver (mg/kg)	400 - 574 cm	19	18	94.7	0.03	0.919	0.42	0.42	0.919	0.018 U	0.919	0.4	0.42	0.919
Zinc (mg/kg)	23 - 199 cm	254	254	100.0	44.3	1930	160	131	360	44.3	1930	160	131	360
Zinc (mg/kg)	200 - 399 cm	237	237	100.0	34.2	891	130	95.8	292	34.2	891	130	95.8	292
Zinc (mg/kg)	400 - 574 cm	19	19	100.0	46.8	263 T	130	118	263 T	46.8	263 T	130	118	263 T
Chromium hexavalent (mg/kg)	23 - 199 cm	14	4	28.6	0.2 J	0.3 J	0.25	0.2 J	0.3 J	0.2 U	0.3 J	0.21	0.2 J	0.3 J
Chromium hexavalent (mg/kg)	200 - 399 cm	22	2	9.1	0.11 JT	0.2 JT	0.16	0.11 JT	0.2 JT	0.11 JT	0.2 U	0.2	0.2 UJ	0.2 UT
Chromium hexavalent (mg/kg)	400 - 574 cm	1	0	0.0						0.2 UT	0.2 UT	0.2	0.2 UT	0.2 UT

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

Analyte	Depth Interval	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Maximum	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th
Butyltins (ug/kg)														
Butyltin ion (ug/kg)	23 - 199 cm	87	71	81.6	0.13 J	540 J	15	0.815 JT	39	0.089 UJ	540 J	12	0.65 J	38
Butyltin ion (ug/kg)	200 - 399 cm	76	38	50.0	0.12 J	23	1.8	0.63 J	7.7	0.084 U	23	0.97	0.13 U	3.7
Butyltin ion (ug/kg)	400 - 574 cm	5	3	60.0	0.32 J	0.56 J	0.41	0.35 J	0.56 J	0.11 U	0.56 J	0.29	0.32 J	0.56 J
Dibutyltin ion (ug/kg)	23 - 199 cm	88	76	86.4	0.12 J	6000 J	130	3.2	180	0.052 U	6000 J	120	2.1 JT	150
Dibutyltin ion (ug/kg)	200 - 399 cm	78	48	61.5	0.087 J	79	7.3	1.2 J	31	0.051 U	79	4.5	0.15 J	27
Dibutyltin ion (ug/kg)	400 - 574 cm	5	3	60.0	0.67 J	0.83 J	0.76	0.77 J	0.83 J	0.059 U	0.83 J	0.48	0.67 J	0.83 J
Tributyltin ion (ug/kg)	23 - 199 cm	88	67	76.1	0.39 J	36000 J	1100	16	1400	0.2 U	36000 J	850	6.5	1000
Tributyltin ion (ug/kg)	200 - 399 cm	78	36	46.2	0.32 J	910	62	2.3	550	0.2 U	910	29	0.28 U	140
Tributyltin ion (ug/kg)	400 - 574 cm	5	0	0.0						0.23 U	0.28 U	0.26	0.27 U	0.28 U
Tetrabutyltin (ug/kg)	23 - 199 cm	88	31	35.2	0.22 J	510 J	35	1.6 J	470	0.15 U	510 J	12	0.23 U	11
Tetrabutyltin (ug/kg)	200 - 399 cm	78	11	14.1	0.4 J	14	2.5	0.87 J	14	0.15 U	14	0.52	0.2 U	1.8 J
Tetrabutyltin (ug/kg)	400 - 574 cm	5	0	0.0						0.18 U	0.21 U	0.2	0.2 U	0.21 U
PCB Aroclors (ug/kg)														
Aroclor 1016 (ug/kg)	23 - 199 cm	226	0	0.0						1.09 U	547 U	8.3	1.79 U	23.4 U
Aroclor 1016 (ug/kg)	200 - 399 cm	216	0	0.0						1.09 U	846 UJ	6.4	1.58 U	7.45 U
Aroclor 1016 (ug/kg)	400 - 574 cm	19	0	0.0						1.25 U	6.36 U	2.1	1.56 U	6.36 U
Aroclor 1242 (ug/kg)	23 - 199 cm	226	8	3.5	13.7 J	16400	2700	210 J	16400	1.11 U	16400	100	1.84 U	50.2 U
Aroclor 1242 (ug/kg)	200 - 399 cm	216	1	0.5	111	111	110	111	111	1.11 U	846 UJ	6.9	1.61 U	8.62 U
Aroclor 1242 (ug/kg)	400 - 574 cm	19	0	0.0						1.28 U	6.47 U	2.1	1.59 U	6.47 U
Aroclor 1248 (ug/kg)	23 - 199 cm	226	112	49.6	1.73 J	1850 J	110	36.4 J	472	1.42 U	1850 J	63	7.74 J	297
Aroclor 1248 (ug/kg)	200 - 399 cm	216	75	34.7	2.03 J	1270	74	34	202 J	1.42 U	1270	31	2.17 U	125 J
Aroclor 1248 (ug/kg)	400 - 574 cm	19	9	47.4	1.97	689 JT	100	11	689 JT	1.63 U	689 JT	50	2.09 UJ	689 JT
Aroclor 1254 (ug/kg)	23 - 199 cm	226	150	66.4	1.84 J	5520 J	210	56 J	783	0.663 U	5520 J	140	22.7 J	629 J
Aroclor 1254 (ug/kg)	200 - 399 cm	216	98	45.4	0.906	605 J	83	58.7 J	234	0.662 U	846 UJ	42	2.59 U	163 J
Aroclor 1254 (ug/kg)	400 - 574 cm	19	9	47.4	19.8	315 J	110	87.5 JT	315 J	0.762 U	315 J	51	2.11 U	315 J
Aroclor 1260 (ug/kg)	23 - 199 cm	226	160	70.8	1.78 J	3200 J	140	37	458 J	0.851 U	3200 J	100	20.9	380 J
Aroclor 1260 (ug/kg)	200 - 399 cm	216	105	48.6	2.01 J	522 J	58	37	202 J	0.85 U	846 UJ	33	2.08 J	159 J
Aroclor 1260 (ug/kg)	400 - 574 cm	19	10	52.6	4.81 J	139	52	37.6	139	0.978 U	139	28	4.81 J	139
Aroclor 1262 (ug/kg)	23 - 199 cm	226	0	0.0						1.02 U	511 U	7.8	1.67 U	21.9 U
Aroclor 1262 (ug/kg)	200 - 399 cm	216	0	0.0						1.02 U	846 UJ	6.3	1.48 U	6.95 U
Aroclor 1262 (ug/kg)	400 - 574 cm	19	0	0.0						1.17 U	5.94 U	1.9	1.46 U	5.94 U
Aroclor 1268 (ug/kg)	23 - 199 cm	226	12	5.3	3.27 J	474 J	92	27.1 J	474 J	0.875 U	474 J	12	1.48 U	39.6 U
Aroclor 1268 (ug/kg)	200 - 399 cm	216	9	4.2	1.64 J	209 J	47	32.9 J	209 J	0.874 U	846 UJ	7.8	1.28 U	11.6 U
Aroclor 1268 (ug/kg)	400 - 574 cm	19	5	26.3	11.3 J	24.4	17	17 J	24.4	1.01 U	24.4	5.8	1.29 UJ	24.4
Aroclor 1221 (ug/kg)	23 - 199 cm	226	0	0.0						2.02 U	1010 U	15	3.35 U	36.1 U
Aroclor 1221 (ug/kg)	200 - 399 cm	216	0	0.0						2.02 U	846 UJ	8.5	2.93 U	13.8 U
Aroclor 1221 (ug/kg)	400 - 574 cm	19	0	0.0						2.32 U	11.8 U	3.8	2.89 U	11.8 U
Aroclor 1232 (ug/kg)	23 - 199 cm	226	0	0.0						1.83 U	916 U	13	2.99 U	32.6 U
Aroclor 1232 (ug/kg)	200 - 399 cm	216	0	0.0						1.82 U	846 UJ	8	2.65 U	12.5 U
Aroclor 1232 (ug/kg)	400 - 574 cm	19	0	0.0						2.1 U	10.6 U	3.4	2.61 U	10.6 U
Polychlorinated biphenyls (ug/kg)	23 - 199 cm	226	166	73.5	1.84 JT	21900 JT	540	121 JT	1280 JT	1.84 JT	21900 JT	400	55.5 JT	2750 JT
Polychlorinated biphenyls (ug/kg)	200 - 399 cm	216	111	51.4	0.906 T	2110 JT	180	109 JT	395 JT	0.906 T	2110 JT	99	5.84 JT	595 JT
Polychlorinated biphenyls (ug/kg)	400 - 574 cm	19	12	63.2	16.1 JT	832 JT	210	110 JT	832 JT	2.32 UT	832 JT	130	34.6 T	832 JT
Organochlorine Pesticides (ug/kg)														
2,4'-DDD (ug/kg)	23 - 199 cm	217	184	84.8	0.056 NJ	1690 J	29	2.2 NJ	83.6 J	0.0277 U	1690 J	25	1.72 NJT	83.1 NJ
2,4'-DDD (ug/kg)	200 - 399 cm	208	139	66.8	0.078 J	19300 NJ	300	2.83 NJ	135 JT	0.0283 U	19300 NJ	200	0.78 NJ	74.4 NJ
2,4'-DDD (ug/kg)	400 - 574 cm	19	15	78.9	0.1 J	75.8 J	8.5	3.82 NJ	75.8 J	0.0344 U	75.8 J	6.8	0.779 U	75.8 J
2,4'-DDE (ug/kg)	23 - 199 cm	217	85	39.2	0.041 J	139 NJ	9.3	1.44 J	35.4 J	0.0294 U	139 NJ	3.7	0.224 U	25.1 J
2,4'-DDE (ug/kg)	200 - 399 cm	208	78	37.5	0.051 J	632 NJ	18	2.09 J	58.2 J	0.0301 U	632 NJ	6.9	0.211 J	12.7 U
2,4'-DDE (ug/kg)	400 - 574 cm	19	11	57.9	0.114	16.4 J	4.1	2.6 J	16.4 J	0.0344 U	16.4 J	2.4	0.417 U	16.4 J
2,4'-DDT (ug/kg)	23 - 199 cm	217	122	56.2	0.085 J	438 NJ	12	1.03 NJ	58.6 J	0.0389 UJ	438 NJ	6.8	0.348 J	22.4 NJ
2,4'-DDT (ug/kg)	200 - 399 cm	208	95	45.7	0.114 J	4290 NJ	110	1.63 J	280 J	0.0397 UJ	4290 NJ	50	0.289 UJ	58.8 NJ
2,4'-DDT (ug/kg)	400 - 574 cm	19	9	47.4	0.165	2.98 NJ	1	0.612 J	2.98 NJ	0.0483 U	2.98 NJ	0.66	0.307 UJ	2.98 NJ

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

		Number	Number	%	Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	Depth Interval	of Samples	Detected	Detected	Minimum	Maximum	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th
4,4'-DDD (ug/kg)	23 - 199 cm	217	193	88.9	0.129 J	4280 NJ	80	6.74 NJ	341 NJ	0.0415 U	4280 NJ	71	4.92 J	320 NJ
4,4'-DDD (ug/kg)	200 - 399 cm	208	150	72.1	0.093	51800 NJ	680	9.51 J	717 J	0.0424 U	51800 NJ	490	2.85 NJ	566 NJT
4,4'-DDD (ug/kg)	400 - 574 cm	19	14	73.7	0.142 NJ	165 NJ	28	11.9 J	165 NJ	0.0515 UJ	165 NJ	20	3.38 NJ	165 NJ
4,4'-DDE (ug/kg)	23 - 199 cm	217	184	84.8	0.079 J	2690 J	27	4.05 NJ	58.8	0.0389 U	2690 J	23	3.36 J	54.9 NJ
4,4'-DDE (ug/kg)	200 - 399 cm	208	134	64.4	0.069 J	992 J	29	5.26 J	101 NJ	0.0397 U	992 J	19	1.15 JT	50 J
4,4'-DDE (ug/kg)	400 - 574 cm	19	11	57.9	0.382 NJ	22 NJ	9.6	9.89 J	22 NJ	0.0455 U	22 NJ	5.7	1.09 U	22 NJ
4,4'-DDT (ug/kg)	23 - 199 cm	209	174	83.3	0.071 NJ	2780 J	52	1.56 NJ	256 J	0.0498 UJ	2780 J	44	1.01 J	223 J
4,4'-DDT (ug/kg)	200 - 399 cm	199	139	69.8	0.086 J	22000 J	440	2.46 J	492 JT	0.049 UJ	22000 J	300	0.816 J	446 J
4,4'-DDT (ug/kg)	400 - 574 cm	17	11	64.7	0.329 NJ	61.5 J	11	2.9 J	61.5 J	0.0595 UJ	61.5 J	7.2	1.84 J	61.5 J
Total of 4,4'-DDD, -DDE, -DDT (ug/kg)	23 - 199 cm	217	200	92.2	0.08 JT	7140 JT	150	11.7 JT	546 JT	0.0498 UJT	7140 JT	140	9.92 JT	546 JT
Total of 4,4'-DDD, -DDE, -DDT (ug/kg)	200 - 399 cm	208	165	79.3	0.087 JT	72700 JT	1000	13.4 JT	1020 JT	0.049 UJT	72700 JT	800	6.33 JT	1120 JT
Total of 4,4'-DDD, -DDE, -DDT (ug/kg)	400 - 574 cm	19	14	73.7	0.213 JT	182 JT	44	33.1 JT	182 JT	0.0595 UJT	182 JT	32	12.1 JT	182 JT
Aldrin (ug/kg)	23 - 199 cm	199	43	21.6	0.119 J	637 J	27	1.52 NJ	125 NJ	0.0269 UJ	637 J	6	0.178 UJ	12.8 NJ
Aldrin (ug/kg)	200 - 399 cm	191	33	17.3	0.193 NJ	1340 J	54	2.64	111 JT	0.0275 UJ	1340 J	9.5	0.172 UJ	11.6 J
Aldrin (ug/kg)	400 - 574 cm	19	2	10.5	0.695 NJ	1.38 NJ	1	0.695 NJ	1.38 NJ	0.0315 UJ	1.38 NJ	0.3	0.196 UJ	1.38 NJ
alpha-Hexachlorocyclohexane (ug/kg)	23 - 199 cm	205	33	16.1	0.128 J	98.9 NJ	4.8	0.769 J	18.1 J	0.0288 U	98.9 NJ	0.93	0.205 U	1.5 NJ
alpha-Hexachlorocyclohexane (ug/kg)	200 - 399 cm	200	31	15.5	0.074 J	7.37 NJ	1.2	0.592 NJ	5.75 NJ	0.0294 U	14.9 U	0.58	0.204 U	1.83 J
alpha-Hexachlorocyclohexane (ug/kg)	400 - 574 cm	19	1	5.3	0.295 J	0.295 J	0.3	0.295 J	0.295 J	0.0337 U	0.81 U	0.23	0.217 U	0.81 U
beta-Hexachlorocyclohexane (ug/kg)	23 - 199 cm	217	159	73.3	0.058 J	51.8 NJ	4.7	2.78 NJ	17.9 NJ	0.0291 U	51.8 NJ	3.5	2 NJ	12.9 NJ
beta-Hexachlorocyclohexane (ug/kg)	200 - 399 cm	208	147	70.7	0.057 JT	318 NJ	6.1	2.59 NJ	12.1 NJ	0.0297 U	318 NJ	4.5	1.73 J	11.2 JT
beta-Hexachlorocyclohexane (ug/kg)	400 - 574 cm	19	12	63.2	0.243 J	12.5 NJ	4.2	1.88 J	12.5 NJ	0.0359 UT	12.5 NJ	2.8	0.865 NJ	12.5 NJ
delta-Hexachlorocyclohexane (ug/kg)	23 - 199 cm	210	6	2.9	0.256 NJ	3.8 J	1.1	0.4 J	3.8 J	0.0615 UJ	10.2 UJ	0.52	0.39 UJ	1.58 J
delta-Hexachlorocyclohexane (ug/kg)	200 - 399 cm	201	7	3.5	0.141 J	45.4 NJ	13	1.3 NJT	45.4 NJ	0.0629 UJ	45.4 NJ	1.2	0.356 U	1.78 UJ
delta-Hexachlorocyclohexane (ug/kg)	400 - 574 cm	15	2	13.3	0.131 J	1.25 NJ	0.69	0.131 J	1.25 NJ	0.072 U	1.73 UJ	0.57	0.464 UJ	1.73 UJ
gamma-Hexachlorocyclohexane (ug/kg)	23 - 199 cm	217	30	13.8	0.548 NJ	38.7 NJ	4.5	2.31 NJ	8.72 NJ	0.0657 U	38.7 NJ	1.1	0.455 U	5.64 NJ
gamma-Hexachlorocyclohexane (ug/kg)	200 - 399 cm	208	17	8.2	0.992 NJ	172 NJ	15	2.93 NJ	172 NJ	0.0672 U	172 NJ	2	0.414 U	3.94 U
gamma-Hexachlorocyclohexane (ug/kg)	400 - 574 cm	19	2	10.5	9.89 NJ	10.3 NJ	10	9.89 NJ	10.3 NJ	0.0769 U	10.3 NJ	1.5	0.479 U	10.3 NJ
cis-Chlordane (ug/kg)	23 - 199 cm	217	109	50.2	0.091 J	630 J	9.2	0.781 NJ	17.1 NJ	0.0286 U	630 J	4.7	0.338 J	9.14 NJ
cis-Chlordane (ug/kg)	200 - 399 cm	208	80	38.5	0.046 J	51.3 NJ	5.1	1.36 NJ	20.1 J	0.0293 U	51.3 NJ	2.3	0.218 UJ	12.4 U
cis-Chlordane (ug/kg)	400 - 574 cm	19	5	26.3	1.64 NJ	11.3 NJ	5.2	3.85 NJ	11.3 NJ	0.0336 U	11.3 NJ	1.5	0.226 UJ	11.3 NJ
trans-Chlordane (ug/kg)	23 - 199 cm	217	102	47.0	0.034 NJ	1140 J	13	0.501 NJ	8.24 J	0.0181 U	1140 J	6.2	0.174 U	3.82 NJ
trans-Chlordane (ug/kg)	200 - 399 cm	208	74	35.6	0.038 J	653 NJ	12	0.501 J	24.7 NJ	0.0185 U	653 NJ	4.4	0.138 U	4.94
trans-Chlordane (ug/kg)	400 - 574 cm	19	8	42.1	0.063 J	1.27 NJ	0.62	0.572 J	1.27 NJ	0.0212 U	1.27 NJ	0.34	0.256 U	1.27 NJ
Oxychlordane (ug/kg)	23 - 199 cm	216	29	13.4	0.14 NJ	32.8	4.9	1.59 NJ	32.6 JT	0.0155 U	32.8	0.77	0.105 U	2.5 NJ
Oxychlordane (ug/kg)	200 - 399 cm	207	6	2.9	0.48 NJ	339 J	60	3.01 J	339 J	0.0159 U	339 J	1.9	0.0897 UJ	0.595 U
Oxychlordane (ug/kg)	400 - 574 cm	19	0	0.0						0.0182 U	0.437 U	0.12	0.113 U	0.437 U
cis-Nonachlor (ug/kg)	23 - 199 cm	217	94	43.3	0.069 J	80.2 J	3.3	0.553 NJ	10.8 NJ	0.0359 U	80.2 J	1.6	0.285 UJ	8.03 NJ
cis-Nonachlor (ug/kg)	200 - 399 cm	208	60	28.8	0.044 J	12.5 JT	1.4	0.49	5.88 J	0.0367 U	18.6 UJ	0.84	0.259 U	3.23 J
cis-Nonachlor (ug/kg)	400 - 574 cm	19	2	10.5	0.988 NJ	4.51 NJ	2.7	0.988 NJ	4.51 NJ	0.042 U	4.51 NJ	0.54	0.27 U	4.51 NJ
trans-Nonachlor (ug/kg)	23 - 199 cm	217	67	30.9	0.096 J	480 J	14	0.819 NJ	38.4 NJ	0.0312 U	480 J	4.5	0.247 UJ	16.1 J
trans-Nonachlor (ug/kg)	200 - 399 cm	208	43	20.7	0.054 J	886 NJ	30	2.92 NJ	38.3 NJ	0.0319 U	886 NJ	6.4	0.212 U	17.6 NJ
trans-Nonachlor (ug/kg)	400 - 574 cm	19	1	5.3	1.33 J	1.33 J	1.3	1.33 J	1.33 J	0.0366 U	1.33 J	0.3	0.236 U	1.33 J
Total Chlordanes (ug/kg)	23 - 199 cm	217	153	70.5	0.069 JT	2330 JT	24	2.15 JT	42.5 JT	0.0359 UT	2330 JT	17	1.46 JT	64.7 JT
Total Chlordanes (ug/kg)	200 - 399 cm	208	117	56.3	0.038 JT	992 JT	26	2.34 JT	51.1 JT	0.0367 UT	992 JT	15	0.454 UJT	55.5 JT
Total Chlordanes (ug/kg)	400 - 574 cm	19	9	47.4	0.063 JT	12.7 JT	4.2	3.52 JT	12.7 JT	0.042 UT	12.7 JT	2.1	0.508 UT	12.7 JT
Dieldrin (ug/kg)	23 - 199 cm	217	7	3.2	0.303 NJ	51 J	12	1.12 NJ	51 J	0.044 UJ	51 J	0.72	0.267 U	1.5 U
Dieldrin (ug/kg)	200 - 399 cm	208	2	1.0	0.406 NJ	0.87 J	0.64	0.406 NJ	0.87 J	0.045 UJ	22.9 U	0.61	0.255 UJ	0.934 U
Dieldrin (ug/kg)	400 - 574 cm	19	0	0.0						0.0516 U	1.24 U	0.34	0.321 U	1.24 U
alpha-Endosulfan (ug/kg)	23 - 199 cm	217	6	2.8	0.125 NJ	35.8 NJ	6.5	0.68 J	35.8 NJ	0.0248 U	35.8 NJ	0.37	0.156 UJ	0.843 U
alpha-Endosulfan (ug/kg)	200 - 399 cm	208	2	1.0	0.253 NJ	0.33 J	0.29	0.253 NJ	0.33 J	0.0253 U	12.9 U	0.34	0.143 U	0.525 U
alpha-Endosulfan (ug/kg)	400 - 574 cm	19	0	0.0						0.029 U	0.698 U	0.2	0.181 U	0.698 U
beta-Endosulfan (ug/kg)	23 - 199 cm	217	30	13.8	0.12 JT	2.18	0.43	0.307 NJ	1.06 NJ	0.0216 UJ	3.43 U	0.22	0.148 U	0.735 U
beta-Endosulfan (ug/kg)	200 - 399 cm	208	36	17.3	0.094 J	170 J	5.2	0.339 NJ	2.21 NJ	0.0218 U	170 J	1.1	0.152 UJ	0.915 NJ
beta-Endosulfan (ug/kg)	400 - 574 cm	19	4	21.1	0.321 J	6.98 J	2.5	0.37 J	6.98 J	0.0255 UT	6.98 J	0.65	0.163 U	6.98 J

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

Analyte	Depth Interval	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Detected Concentrations Maximum	Detected Concentrations Mean	Detected Concentrations Median	Detected Concentrations 95th	Detected and Nondetected Concentrations Minimum	Detected and Nondetected Concentrations Maximum	Detected and Nondetected Concentrations Mean	Detected and Nondetected Concentrations Median	Detected and Nondetected Concentrations 95th
Endosulfan sulfate (ug/kg)	23 - 199 cm	216	0	0.0						0.0635 U	10.5 UJ	0.5	0.383 UJ	1.2 UJ
Endosulfan sulfate (ug/kg)	200 - 399 cm	207	1	0.5	0.227 J	0.227 J	0.23	0.227 J	0.227 J	0.065 U	33 UJ	0.87	0.366 U	1.35 UJ
Endosulfan sulfate (ug/kg)	400 - 574 cm	19	0	0.0						0.0744 UJ	1.79 UJ	0.5	0.463 U	1.79 UJ
Endrin (ug/kg)	23 - 199 cm	94	30	31.9	0.141 NJ	311 J	29	5.11 NJ	168 NJ	0.0376 UJ	311 J	9.4	0.257 UJ	27.7 J
Endrin (ug/kg)	200 - 399 cm	96	37	38.5	0.181 NJ	125 NJ	10	3 NJ	58 NJ	0.0367 U	125 NJ	4.1	0.277 UJ	18.9 NJ
Endrin (ug/kg)	400 - 574 cm	8	2	25.0	0.604 NJ	3.27 NJ	1.9	0.604 NJ	3.27 NJ	0.0424 UJ	3.27 NJ	0.65	0.263 UJ	3.27 NJ
Endrin aldehyde (ug/kg)	23 - 199 cm	217	10	4.6	0.069 NJ	407 NJ	49	3.42 NJ	407 NJ	0.039 UJ	407 NJ	2.5	0.227 UJ	1.34 U
Endrin aldehyde (ug/kg)	200 - 399 cm	208	9	4.3	0.134 NJ	166 NJ	45	12.7 NJ	166 NJ	0.0395 UJ	166 NJ	2.3	0.217 U	2.64 NJ
Endrin aldehyde (ug/kg)	400 - 574 cm	19	0	0.0						0.044 U	1.06 U	0.29	0.274 U	1.06 U
Endrin ketone (ug/kg)	23 - 199 cm	217	32	14.7	0.399 NJ	55.9 NJ	4.3	1.77 NJ	18.3 NJ	0.0253 U	55.9 NJ	0.79	0.17 UJ	2.42 NJ
Endrin ketone (ug/kg)	200 - 399 cm	208	17	8.2	0.252 NJT	263 NJ	18	2.18 NJ	263 NJ	0.0259 U	263 NJ	1.8	0.16 U	2.27 NJ
Endrin ketone (ug/kg)	400 - 574 cm	19	3	15.8	0.847 NJ	7.89 NJ	3.6	1.96 NJ	7.89 NJ	0.0296 U	7.89 NJ	0.72	0.195 UJ	7.89 NJ
Heptachlor (ug/kg)	23 - 199 cm	217	10	4.6	0.317 NJ	5.75 NJ	1.8	0.864 NJ	5.75 NJ	0.0262 U	5.75 NJ	0.28	0.165 UJ	0.967 U
Heptachlor (ug/kg)	200 - 399 cm	208	11	5.3	0.126 J	4.87 NJ	1	0.676 NJ	4.87 NJ	0.0268 U	13.6 UJ	0.41	0.16 UJ	0.986 U
Heptachlor (ug/kg)	400 - 574 cm	19	1	5.3	0.257 J	0.257 J	0.26	0.257 J	0.257 J	0.0323 UT	0.737 UJ	0.22	0.197 U	0.737 UJ
Heptachlor epoxide (ug/kg)	23 - 199 cm	216	3	1.4	0.491 NJ	1.18 NJ	0.95	1.17 NJ	1.18 NJ	0.0341 U	5.67 U	0.28	0.207 U	1.16 U
Heptachlor epoxide (ug/kg)	200 - 399 cm	208	3	1.4	0.605 J	2.18 J	1.2	0.722 NJ	2.18 J	0.0349 U	17.7 U	0.48	0.202 U	0.99 U
Heptachlor epoxide (ug/kg)	400 - 574 cm	19	0	0.0						0.04 U	0.961 U	0.27	0.249 U	0.961 U
Methoxychlor (ug/kg)	23 - 199 cm	217	9	4.1	0.505 J	189 NJ	41	2.67 NJ	189 NJ	0.034 UJ	189 NJ	1.9	0.212 UJ	1.31 U
Methoxychlor (ug/kg)	200 - 399 cm	208	7	3.4	0.552 J	513 J	110	16.6 NJ	513 J	0.0348 UJ	513 J	4	0.197 UJ	1.31 U
Methoxychlor (ug/kg)	400 - 574 cm	19	0	0.0						0.0399 UJ	0.958 UJ	0.27	0.248 U	0.958 UJ
Mirex (ug/kg)	23 - 199 cm	217	1	0.5	0.672 J	0.672 J	0.67	0.672 J	0.672 J	0.0309 U	5.13 UJ	0.25	0.187 U	0.657 U
Mirex (ug/kg)	200 - 399 cm	207	1	0.5	14 J	14 J	14	14 J	14 J	0.0316 U	16.1 U	0.49	0.178 U	0.896 U
Mirex (ug/kg)	400 - 574 cm	19	0	0.0						0.0362 U	0.87 U	0.24	0.225 UJ	0.87 U
Toxaphene (ug/kg)	23 - 199 cm	217	0	0.0						8.09 U	1340 U	63	48.8 U	152 U
Toxaphene (ug/kg)	200 - 399 cm	208	0	0.0						8.27 U	4210 UJ	110	46.7 U	172 U
Toxaphene (ug/kg)	400 - 574 cm	19	0	0.0						9.48 U	228 UJ	63	59 U	228 UJ
Semivolatile Organic Compounds (ug/kg)														
1,2,4-Trichlorobenzene (ug/kg)	23 - 199 cm	255	4	1.6	5 J	92 J	47	39	92 J	1.7 U	1500 U	40	4.7 U	150 U
1,2,4-Trichlorobenzene (ug/kg)	200 - 399 cm	237	4	1.7	2.6 JT	150	45	11 J	150	1.7 U	3800 U	54	4.7 U	140 U
1,2,4-Trichlorobenzene (ug/kg)	400 - 574 cm	19	0	0.0						2 U	150 U	21	5 U	150 U
1,2-Dichlorobenzene (ug/kg)	23 - 199 cm	255	13	5.1	2.5 J	210	34	9.9 J	210	1.5 U	1300 U	36	4.1 U	130 U
1,2-Dichlorobenzene (ug/kg)	200 - 399 cm	237	6	2.5	3.3 J	42 J	14	7	42 J	1.5 U	3300 U	46	4.2 U	120 U
1,2-Dichlorobenzene (ug/kg)	400 - 574 cm	19	0	0.0						1.8 U	130 U	18	4.3 U	130 U
1,3-Dichlorobenzene (ug/kg)	23 - 199 cm	255	2	0.8	4.9 J	56 J	30	4.9 J	56 J	1.8 U	1600 U	42	4.9 J	160 U
1,3-Dichlorobenzene (ug/kg)	200 - 399 cm	237	1	0.4	3.3 J	3.3 J	3.3	3.3 J	3.3 J	1.8 U	4000 U	56	5 U	140 U
1,3-Dichlorobenzene (ug/kg)	400 - 574 cm	19	0	0.0						2.2 U	160 U	22	5.3 U	160 U
1,4-Dichlorobenzene (ug/kg)	23 - 199 cm	256	16	6.3	0.36 J	180	20	7 J	180	0.15 U	1400 U	23	3.2 U	61 U
1,4-Dichlorobenzene (ug/kg)	200 - 399 cm	273	14	5.1	0.42 J	34	11	4.1 JT	34	0.14 U	4800 U	47	2.5 U	61 U
1,4-Dichlorobenzene (ug/kg)	400 - 574 cm	26	1	3.8	7.3 J	7.3 J	7.3	7.3 J	7.3 J	0.16 U	58 U	3.3	0.19 U	7.3 J
Azobenzene (ug/kg)	23 - 199 cm	255	0	0.0						2.7 U	2400 U	63	6.9 U	240 U
Azobenzene (ug/kg)	200 - 399 cm	237	0	0.0						2.7 U	6000 U	85	7.4 U	210 U
Azobenzene (ug/kg)	400 - 574 cm	19	0	0.0						3.2 U	240 U	34	8 U	240 U
2,4-Dinitrotoluene (ug/kg)	23 - 199 cm	255	2	0.8	11 J	2100	1100	11 J	2100	3.1 U	2800 U	81	8.5 U	280 U
2,4-Dinitrotoluene (ug/kg)	200 - 399 cm	237	0	0.0						3.1 U	7000 U	99	8.6 U	250 U
2,4-Dinitrotoluene (ug/kg)	400 - 574 cm	19	0	0.0						3.8 U	280 U	39	9.3 U	280 U
2,6-Dinitrotoluene (ug/kg)	23 - 199 cm	255	0	0.0						3.1 U	2800 U	74	8.1 U	280 U
2,6-Dinitrotoluene (ug/kg)	200 - 399 cm	237	0	0.0						3.1 U	7000 U	99	8.6 U	250 U
2,6-Dinitrotoluene (ug/kg)	400 - 574 cm	19	0	0.0						3.8 U	280 U	39	9.3 U	280 U
2-Chloronaphthalene (ug/kg)	23 - 199 cm	255	0	0.0						4 U	3600 U	94	11 U	360 U
2-Chloronaphthalene (ug/kg)	200 - 399 cm	237	1	0.4	41	41	41	41	41	4 U	9000 U	130	12 U	320 U
2-Chloronaphthalene (ug/kg)	400 - 574 cm	19	0	0.0						4.8 U	360 U	50	12 U	360 U
2-Nitroaniline (ug/kg)	23 - 199 cm	255	0	0.0						3 U	2700 U	71	7.8 U	270 U
2-Nitroaniline (ug/kg)	200 - 399 cm	237	0	0.0						3 U	6800 U	95	8.3 U	240 U
2-Nitroaniline (ug/kg)	400 - 574 cm	19	0	0.0						3.6 U	270 U	38	9 U	270 U

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

		Number	Number	%	Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	Depth Interval	of Samples	Detected	Detected	Minimum	Maximum	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th
3,3'-Dichlorobenzidine (ug/kg)	23 - 199 cm	250	0	0.0						4.1 U	3700 U	100	12 U	370 UJ
3,3'-Dichlorobenzidine (ug/kg)	200 - 399 cm	234	0	0.0						4.1 U	9300 U	130	12 U	330 UJ
3,3'-Dichlorobenzidine (ug/kg)	400 - 574 cm	19	0	0.0						5 U	370 U	52	13 U	370 U
3-Nitroaniline (ug/kg)	23 - 199 cm	255	0	0.0						2.9 U	2600 U	68	7.5 U	260 U
3-Nitroaniline (ug/kg)	200 - 399 cm	237	0	0.0						2.9 U	6500 U	92	8 U	230 U
3-Nitroaniline (ug/kg)	400 - 574 cm	19	0	0.0						3.5 U	260 U	36	8.6 U	260 U
4-Bromophenyl phenyl ether (ug/kg)	23 - 199 cm	255	0	0.0						1.6 U	1400 U	38	4.1 U	140 U
4-Bromophenyl phenyl ether (ug/kg)	200 - 399 cm	237	0	0.0						1.6 U	3500 U	49	4.3 U	130 U
4-Bromophenyl phenyl ether (ug/kg)	400 - 574 cm	19	0	0.0						1.9 U	140 U	20	4.7 U	140 U
4-Chloroaniline (ug/kg)	23 - 199 cm	255	2	0.8	2.9 J	4.6 J	3.8	2.9 J	4.6 J	2.3 U	2100 U	55	6.1 U	210 U
4-Chloroaniline (ug/kg)	200 - 399 cm	237	1	0.4	10 J	10 J	10	10 J	10 J	2.4 U	5300 U	75	6.5 U	190 U
4-Chloroaniline (ug/kg)	400 - 574 cm	19	0	0.0						2.8 U	210 U	30	7 U	210 U
4-Chlorophenyl phenyl ether (ug/kg)	23 - 199 cm	255	0	0.0						2.2 U	2000 U	52	5.8 U	200 U
4-Chlorophenyl phenyl ether (ug/kg)	200 - 399 cm	237	0	0.0						2.3 U	5000 U	71	6.2 U	180 U
4-Chlorophenyl phenyl ether (ug/kg)	400 - 574 cm	19	0	0.0						2.7 U	200 U	28	6.7 U	200 U
4-Nitroaniline (ug/kg)	23 - 199 cm	255	0	0.0						3.7 U	3400 U	89	9.8 U	340 U
4-Nitroaniline (ug/kg)	200 - 399 cm	237	1	0.4	30	30	30	30	30	3.8 U	8500 U	120	11 U	300 U
4-Nitroaniline (ug/kg)	400 - 574 cm	19	0	0.0						4.6 U	340 U	48	12 U	340 U
Aniline (ug/kg)	23 - 199 cm	222	11	5.0	2.7 J	54	14	8.3 J	54	1.7 UJ	1500 U	45	5 U	150 U
Aniline (ug/kg)	200 - 399 cm	211	2	0.9	2.6 J	170 J	86	2.6 J	170 J	1.7 U	3800 U	59	4.7 U	150 U
Aniline (ug/kg)	400 - 574 cm	19	0	0.0						2 UJ	150 U	21	5 U	150 U
Benzoic acid (ug/kg)	23 - 199 cm	255	4	1.6	155 JT	190 J	180	190 J	190 J	110 U	96000 U	2500	300 UJ	9400 U
Benzoic acid (ug/kg)	200 - 399 cm	231	3	1.3	130 JT	1400 J	580	200	1400 J	110 U	240000 U	3500	300 U	8400 UJ
Benzoic acid (ug/kg)	400 - 574 cm	19	0	0.0						130 UJ	9600 U	1400	320 U	9600 U
Benzyl alcohol (ug/kg)	23 - 199 cm	255	16	6.3	5.6 J	3700	250	10	3700	4.1 U	3700	110	12 U	370 U
Benzyl alcohol (ug/kg)	200 - 399 cm	237	6	2.5	6.2 J	130	47	10	130	4.1 U	9300 U	130	12 U	330 U
Benzyl alcohol (ug/kg)	400 - 574 cm	19	0	0.0						5 U	370 U	52	13 U	370 U
Bis(2-chloroethoxy) methane (ug/kg)	23 - 199 cm	255	0	0.0						1.5 U	1300 U	34	3.8 U	130 U
Bis(2-chloroethoxy) methane (ug/kg)	200 - 399 cm	237	0	0.0						1.5 U	3300 U	46	4 UT	120 U
Bis(2-chloroethoxy) methane (ug/kg)	400 - 574 cm	19	0	0.0						1.8 U	130 U	18	4.3 U	130 U
Bis(2-chloroethyl) ether (ug/kg)	23 - 199 cm	255	0	0.0						2.7 U	2400 U	63	6.9 U	240 U
Bis(2-chloroethyl) ether (ug/kg)	200 - 399 cm	237	0	0.0						2.7 U	6000 U	85	7.4 U	210 U
Bis(2-chloroethyl) ether (ug/kg)	400 - 574 cm	19	0	0.0						3.2 U	240 U	34	8 U	240 U
Carbazole (ug/kg)	23 - 199 cm	255	169	66.3	1.8 JT	130000	2900	16	11000	1.5 U	130000	2000	9.3	5400
Carbazole (ug/kg)	200 - 399 cm	237	128	54.0	2.5 J	520000	12000	22	7500 J	1.5 U	520000	6300	9.2 U	4200
Carbazole (ug/kg)	400 - 574 cm	19	9	47.4	2.4 J	10000	1300	21	10000	1.8 U	10000	610	18 J	10000
Dibenzofuran (ug/kg)	23 - 199 cm	255	244	95.7	0.22 J	55000	1300	9.8	4500	0.2 U	55000	1200	8.8	4500
Dibenzofuran (ug/kg)	200 - 399 cm	237	202	85.2	0.25 J	230000	3500	13	3100	0.19 U	230000	3000	8.5	2800
Dibenzofuran (ug/kg)	400 - 574 cm	19	16	84.2	2.5 J	6300 J	550	19	6300 J	0.23 U	6300 J	460	16	6300 J
Hexachlorobenzene (ug/kg)	23 - 199 cm	255	72	28.2	0.172 J	50.2 JT	4.3	1.29 J	29.8 J	0.0166 UJ	2100 U	24	3.1 J	73 U
Hexachlorobenzene (ug/kg)	200 - 399 cm	237	62	26.2	0.069 JT	134 JT	7.4	1.33 J	12.7	0.0162 U	2100 U	26	2.9 U	68 J
Hexachlorobenzene (ug/kg)	400 - 574 cm	19	2	10.5	0.066 J	0.423 J	0.24	0.066 J	0.423 J	0.066 J	64 U	12	6 U	64 U
Hexachlorobutadiene (ug/kg)	23 - 199 cm	255	17	6.7	0.265 J	88.5 T	11	1.34	88.5 T	0.0297 U	1400 U	9.2	0.22 UJ	11 U
Hexachlorobutadiene (ug/kg)	200 - 399 cm	237	15	6.3	0.081 J	108 J	22	3.23 JT	108 J	0.0304 U	240 U	4.3	0.204 UJ	9.66 U
Hexachlorobutadiene (ug/kg)	400 - 574 cm	19	0	0.0						0.0348 U	0.837 U	0.23	0.217 U	0.837 U
Hexachlorocyclopentadiene (ug/kg)	23 - 199 cm	252	0	0.0						17 U	15000 U	400	43 U	1500 U
Hexachlorocyclopentadiene (ug/kg)	200 - 399 cm	235	0	0.0						17 U	38000 U	540	47 U	1400 U
Hexachlorocyclopentadiene (ug/kg)	400 - 574 cm	19	0	0.0						20 U	1500 U	210	50 U	1500 U
Hexachloroethane (ug/kg)	23 - 199 cm	255	13	5.1	0.207	200	20	2.59 J	200	0.0439 UJ	2200 U	14	0.325 UJ	14 U
Hexachloroethane (ug/kg)	200 - 399 cm	237	13	5.5	0.829 J	261 J	36	11.1 JT	261 J	0.0449 UJ	1200 U	12	0.313 UJT	18.5 J
Hexachloroethane (ug/kg)	400 - 574 cm	19	0	0.0						0.0515 U	1.24 U	0.34	0.32 U	1.24 U
Isophorone (ug/kg)	23 - 199 cm	255	0	0.0						1.8 U	1600 U	42	4.6 U	160 U
Isophorone (ug/kg)	200 - 399 cm	237	0	0.0						1.8 U	4000 U	56	5 U	140 U
Isophorone (ug/kg)	400 - 574 cm	19	0	0.0						2.2 U	160 U	22	5.3 U	160 U

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

		Number	Number	%	Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	**Depth Interval**	**of Samples**	**Detected**	**Detected**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th**
Nitrobenzene (ug/kg)	23 - 199 cm	255	0	0.0						2.2 U	2000 U	52	5.8 U	200 U
Nitrobenzene (ug/kg)	200 - 399 cm	237	0	0.0						2.3 U	5000 U	71	6.2 U	180 U
Nitrobenzene (ug/kg)	400 - 574 cm	19	0	0.0						2.7 U	200 U	28	6.7 U	200 U
N-Nitrosodimethylamine (ug/kg)	23 - 199 cm	255	0	0.0						6.7 U	6100 U	160	18 U	600 U
N-Nitrosodimethylamine (ug/kg)	200 - 399 cm	236	0	0.0						6.8 U	16000 U	220	19 U	530 U
N-Nitrosodimethylamine (ug/kg)	400 - 574 cm	19	0	0.0						8.1 U	610 U	86	21 U	610 U
N-Nitrosodipropylamine (ug/kg)	23 - 199 cm	255	0	0.0						3.5 U	3200 U	84	9.2 U	320 U
N-Nitrosodipropylamine (ug/kg)	200 - 399 cm	237	0	0.0						3.6 U	8000 U	110	9.9 U	280 U
N-Nitrosodipropylamine (ug/kg)	400 - 574 cm	19	0	0.0						4.3 U	320 U	45	11 U	320 U
N-Nitrosodiphenylamine (ug/kg)	23 - 199 cm	255	24	9.4	4.1 J	400	55	19	240	2.4 U	2200 U	63	7.3 U	220 U
N-Nitrosodiphenylamine (ug/kg)	200 - 399 cm	237	22	9.3	4.8 J	560 J	92	30 J	230	2.5 U	5500 U	84	7.1 UJ	220 U
N-Nitrosodiphenylamine (ug/kg)	400 - 574 cm	19	3	15.8	13 J	130	57	29 J	130	3 U	220 U	37	7.4 U	220 U
Bis(2-chloroisopropyl) ether (ug/kg)	23 - 199 cm	255	0	0.0						1.4 U	1200 U	32	3.5 U	120 U
Bis(2-chloroisopropyl) ether (ug/kg)	200 - 399 cm	237	0	0.0						1.4 U	3000 U	42	3.7 U	110 U
Bis(2-chloroisopropyl) ether (ug/kg)	400 - 574 cm	19	0	0.0						1.6 U	120 U	17	4 U	120 U
Phenols (ug/kg)														
2,3,4,6;2,3,5,6-Tetrachlorophenol coelution (ug/kg)	23 - 199 cm	255	25	9.8	0.76 J	89	11	2.5 J	45 J	0.4 U	89	2.2	0.64 U	6.5 U
2,3,4,6;2,3,5,6-Tetrachlorophenol coelution (ug/kg)	200 - 399 cm	237	15	6.3	0.99 J	1000	140	3.3 JT	1000	0.4 U	1000	10	0.58 U	7.7 J
2,3,4,6;2,3,5,6-Tetrachlorophenol coelution (ug/kg)	400 - 574 cm	19	3	15.8	0.89 J	1.1 J	0.99	0.98 J	1.1 J	0.48 U	3.3 U	0.88	0.59 U	3.3 U
2,4,5-Trichlorophenol (ug/kg)	23 - 199 cm	255	12	4.7	1.2 J	38	10	4.8 J	38	0.32 U	45 U	2	0.52 U	9 U
2,4,5-Trichlorophenol (ug/kg)	200 - 399 cm	237	10	4.2	0.48 J	200 J	24	2.9 J	200 J	0.32 U	200 J	3.7	0.48 J	7.7 UT
2,4,5-Trichlorophenol (ug/kg)	400 - 574 cm	19	1	5.3	3 J	3 J	3	3 J	3 J	0.39 U	7.6 U	1.2	0.48 U	7.6 U
2,4,6-Trichlorophenol (ug/kg)	23 - 199 cm	255	22	8.6	0.87 J	340	35	3.1 J	80	0.4 U	340	4.6	0.64 U	19 U
2,4,6-Trichlorophenol (ug/kg)	200 - 399 cm	237	26	11.0	0.76 J	450 J	27	3.2 J	45	0.4 U	450 J	5.5	0.58 U	16
2,4,6-Trichlorophenol (ug/kg)	400 - 574 cm	19	8	42.1	1.3 J	4.15 JT	2.3	2 J	4.15 JT	0.48 U	4.15 JT	1.6	1.3 J	4.15 JT
2,4-Dichlorophenol (ug/kg)	23 - 199 cm	255	8	3.1	17 J	64	38	21	64	2 U	1800 U	48	5.7 U	180 U
2,4-Dichlorophenol (ug/kg)	200 - 399 cm	236	5	2.1	7.1	23	15	15	23	2 U	4500 U	64	5.6 U	160 U
2,4-Dichlorophenol (ug/kg)	400 - 574 cm	19	0	0.0						2.4 U	180 U	25	6 U	180 U
2,4-Dimethylphenol (ug/kg)	23 - 199 cm	169	0	0.0						6 U	5500 U	200	19 U	550 U
2,4-Dimethylphenol (ug/kg)	200 - 399 cm	172	0	0.0						6.1 U	14000 U	250	18 U	550 U
2,4-Dimethylphenol (ug/kg)	400 - 574 cm	19	0	0.0						7.3 U	550 U	77	19 U	550 U
2,4-Dinitrophenol (ug/kg)	23 - 199 cm	255	0	0.0						40 U	36000 U	940	110 U	3600 U
2,4-Dinitrophenol (ug/kg)	200 - 399 cm	236	0	0.0						40 U	90000 U	1300	120 U	3200 U
2,4-Dinitrophenol (ug/kg)	400 - 574 cm	19	0	0.0						48 U	3600 U	500	120 U	3600 U
2-Chlorophenol (ug/kg)	23 - 199 cm	255	3	1.2	8.9 J	20 JT	13	11	20 JT	1.9 U	1700 U	45	5.3 U	170 U
2-Chlorophenol (ug/kg)	200 - 399 cm	237	4	1.7	5.55 JT	19 JT	14	13 J	19 JT	1.9 U	4300 U	60	5.3 U	150 U
2-Chlorophenol (ug/kg)	400 - 574 cm	19	0	0.0						2.3 U	170 U	24	5.7 U	170 U
2-Methylphenol (ug/kg)	23 - 199 cm	255	3	1.2	6.4 J	12 JT	9.5	10	12 JT	3.7 U	3400 U	89	11 U	340 UJ
2-Methylphenol (ug/kg)	200 - 399 cm	237	0	0.0						3.8 U	8500 U	120	11 U	300 U
2-Methylphenol (ug/kg)	400 - 574 cm	19	0	0.0						4.6 U	340 U	48	12 U	340 U
2-Nitrophenol (ug/kg)	23 - 199 cm	255	0	0.0						2.9 U	2600 U	68	7.5 U	260 U
2-Nitrophenol (ug/kg)	200 - 399 cm	237	0	0.0						2.9 U	6500 U	92	8 U	230 U
2-Nitrophenol (ug/kg)	400 - 574 cm	19	0	0.0						3.5 U	260 U	36	8.6 U	260 U
4,6-Dinitro-2-methylphenol (ug/kg)	23 - 199 cm	255	0	0.0						1.9 U	1700 U	45	4.9 U	170 U
4,6-Dinitro-2-methylphenol (ug/kg)	200 - 399 cm	236	0	0.0						1.9 U	4300 U	60	5.3 U	150 U
4,6-Dinitro-2-methylphenol (ug/kg)	400 - 574 cm	19	0	0.0						2.3 U	170 U	24	5.7 U	170 U
4-Chloro-3-methylphenol (ug/kg)	23 - 199 cm	255	4	1.6	4.4 J	32 J	12	6.1 J	32 J	2.3 U	2100 U	56	6.6 U	210 U
4-Chloro-3-methylphenol (ug/kg)	200 - 399 cm	237	3	1.3	4.5 J	18 JT	11	9.8 J	18 JT	2.4 U	5300 U	75	6.7 U	190 U
4-Chloro-3-methylphenol (ug/kg)	400 - 574 cm	19	0	0.0						2.8 U	210 U	30	7 U	210 U
4-Methylphenol (ug/kg)	23 - 199 cm	255	152	59.6	3.6 J	800	52	29	170	3.2 U	2900 U	99	25	290 UJ
4-Methylphenol (ug/kg)	200 - 399 cm	237	112	47.3	5.1 J	540	78	47	260 J	3.2 U	7300 U	130	26	370 J
4-Methylphenol (ug/kg)	400 - 574 cm	19	11	57.9	21	300	120	110	300	3.9 U	300	94	69	300
4-Nitrophenol (ug/kg)	23 - 199 cm	255	0	0.0						0.793 U	30000 U	750	56 U	3000 U
4-Nitrophenol (ug/kg)	200 - 399 cm	237	0	0.0						0.812 U	75000 U	990	48 U	2500 U
4-Nitrophenol (ug/kg)	400 - 574 cm	19	0	0.0						1.03 U	3000 U	340	42 U	3000 U

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

		Number	Number	%	Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	Depth Interval	of Samples	Detected	Detected	Minimum	Maximum	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th
Pentachlorophenol (ug/kg)	23 - 199 cm	255	93	36.5	1.1 J	440	16	5.7 J	53 J	0.43 U	440	6.8	0.79 U	32 J
Pentachlorophenol (ug/kg)	200 - 399 cm	237	69	29.1	1 JT	5600	120	3.9 J	58	0.43 U	5600	35	0.7 U	11 U
Pentachlorophenol (ug/kg)	400 - 574 cm	19	7	36.8	1.2 J	8.6	5.4	5.8 J	8.6	0.52 U	45 U	4.8	0.9 U	45 U
Phenol (ug/kg)	23 - 199 cm	255	79	31.0	2.7 J	220 J	22	9.7 J	100 J	2.3 U	1900 U	56	11 J	190 U
Phenol (ug/kg)	200 - 399 cm	237	63	26.6	2.4 J	170	19	7.4 J	77 J	2.4 U	4800 U	72	11 U	170
Phenol (ug/kg)	400 - 574 cm	19	3	15.8	6.5 J	13 J	9.3	8.5 J	13 J	2.6 U	190 U	27	8.5 J	190 U
2,3,4,5-Tetrachlorophenol (ug/kg)	23 - 199 cm	255	23	9.0	1 J	70 J	9.5	2.7 J	54 J	0.63 U	70 J	2.8	1.1 U	8.9 U
2,3,4,5-Tetrachlorophenol (ug/kg)	200 - 399 cm	237	18	7.6	0.91 J	1100 J	130	4.7 J	1100 J	0.64 U	1100 J	12	0.92 U	13 UT
2,3,4,5-Tetrachlorophenol (ug/kg)	400 - 574 cm	19	0	0.0						0.77 U	7.6 U	1.7	0.95 U	7.6 U
Phthalates (ug/kg)														
Dimethyl phthalate (ug/kg)	23 - 199 cm	255	8	3.1	2.9 J	220	64	22	220	2 U	1800 U	49	5.6 U	180
Dimethyl phthalate (ug/kg)	200 - 399 cm	237	3	1.3	22 JT	5100 J	2000	790	5100 J	2 U	5100 J	81	5.6 U	170 U
Dimethyl phthalate (ug/kg)	400 - 574 cm	19	0	0.0						2.4 U	180 U	25	6 U	180 U
Diethyl phthalate (ug/kg)	23 - 199 cm	255	4	1.6	36	420	150	38	420	3.8 U	3500 U	94	11 U	350 U
Diethyl phthalate (ug/kg)	200 - 399 cm	237	4	1.7	14	410	120	22	410	3.9 U	8800 U	130	11 U	330 U
Diethyl phthalate (ug/kg)	400 - 574 cm	19	0	0.0						4.7 U	350 U	49	12 U	350 U
Dibutyl phthalate (ug/kg)	23 - 199 cm	255	82	32.2	3.5 JT	3200 J	110	8.2 J	310	3.1 U	3200 J	79	9.2 U	260 U
Dibutyl phthalate (ug/kg)	200 - 399 cm	237	56	23.6	3.4 J	490 J	28	5.6 J	99 J	3.1 U	6500 U	94	8.3 U	250 U
Dibutyl phthalate (ug/kg)	400 - 574 cm	19	7	36.8	3.9 J	21	11	9.2 J	21	3.5 U	260 U	38	18 J	260 U
Butylbenzyl phthalate (ug/kg)	23 - 199 cm	255	53	20.8	2.4 J	310	35	9 J	180	1.7 U	1500 U	46	5.4 U	160 U
Butylbenzyl phthalate (ug/kg)	200 - 399 cm	237	19	8.0	2.4 J	42	11	9.8 J	42	1.7 U	3800 U	54	4.9 U	140 U
Butylbenzyl phthalate (ug/kg)	400 - 574 cm	19	2	10.5	16 J	23	20	16 J	23	2 U	150 U	23	12 U	150 U
Di-n-octyl phthalate (ug/kg)	23 - 199 cm	255	9	3.5	4.7 J	170	62	56.5 JT	170	1.4 U	1200 U	34	3.8 U	120 U
Di-n-octyl phthalate (ug/kg)	200 - 399 cm	237	0	0.0						1.4 U	3000 U	42	3.7 U	110 U
Di-n-octyl phthalate (ug/kg)	400 - 574 cm	19	0	0.0						1.6 U	120 U	17	4 U	120 U
Bis(2-ethylhexyl) phthalate (ug/kg)	23 - 199 cm	255	93	36.5	5.4 J	10000	670	100	5600 J	2.1 U	10000	350	59 J	1200
Bis(2-ethylhexyl) phthalate (ug/kg)	200 - 399 cm	237	54	22.8	4.9 J	1700	200	80	880 T	2.3 U	4300 U	130	30	560 J
Bis(2-ethylhexyl) phthalate (ug/kg)	400 - 574 cm	19	1	5.3	94	94	94	94	94	4 U	190 U	62	21 U	190 U
Polycyclic Aromatic Hydrocarbons (ug/kg)														
2-Methylnaphthalene (ug/kg)	23 - 199 cm	255	243	95.3	0.4 J	620000 J	12000	18	26000	0.4 J	620000 J	11000	17	26000
2-Methylnaphthalene (ug/kg)	200 - 399 cm	237	217	91.6	0.45 J	3.80E+06	40000	28	15000	0.41 U	3.80E+06	36000	20	14000
2-Methylnaphthalene (ug/kg)	400 - 574 cm	19	19	100.0	0.47 J	58000 J	3400	48 J	58000 J	0.47 J	58000 J	3400	48 J	58000 J
Acenaphthene (ug/kg)	23 - 199 cm	255	248	97.3	0.19 J	700000 J	13000	31	40000	0.19 U	700000 J	12000	30	40000
Acenaphthene (ug/kg)	200 - 399 cm	237	208	87.8	0.23 J	3.90E+06	39000	51	34000 J	0.18 U	3.90E+06	34000	35	32000
Acenaphthene (ug/kg)	400 - 574 cm	19	16	84.2	4.4	66000 J	5300	110 J	66000 J	0.22 U	66000 J	4500	81	66000 J
Acenaphthylene (ug/kg)	23 - 199 cm	255	244	95.7	0.38 J	91000	1200	15	3200	0.24 U	91000	1100	14	3200
Acenaphthylene (ug/kg)	200 - 399 cm	237	207	87.3	0.33 J	1.50E+06 J	17000	27 J	2700	0.25 U	1.50E+06 J	14000	21	2100
Acenaphthylene (ug/kg)	400 - 574 cm	19	16	84.2	0.39 JT	56000 J	3600	70	56000 J	0.3 U	56000 J	3100	70	56000 J
Anthracene (ug/kg)	23 - 199 cm	255	248	97.3	0.37 J	370000	7500	35	28000	0.24 U	370000	7300	34	28000
Anthracene (ug/kg)	200 - 399 cm	237	210	88.6	0.34 J	1.30E+06	20000	61	23000 J	0.25 U	1.30E+06	18000	45	23000 J
Anthracene (ug/kg)	400 - 574 cm	19	16	84.2	12	56000 J	5200	160	56000 J	0.3 U	56000 J	4300	150	56000 J
Fluorene (ug/kg)	23 - 199 cm	255	245	96.1	0.34 J	320000	6200	27	27000	0.21 U	320000	5900	25	27000
Fluorene (ug/kg)	200 - 399 cm	237	209	88.2	0.29 J	1.50E+06	21000	46	18000	0.21 U	1.50E+06	19000	30	17000
Fluorene (ug/kg)	400 - 574 cm	19	16	84.2	4.7 J	52000 J	4100	79	52000 J	0.26 U	52000 J	3400	67 J	52000 J
Naphthalene (ug/kg)	23 - 199 cm	256	198	77.3	1 J	4.40E+06	72000	65	47000 J	0.44 U	4.40E+06	55000	39	31000
Naphthalene (ug/kg)	200 - 399 cm	273	177	64.8	0.5 J	2.00E+07	350000	110	120000	0.4 U	2.00E+07	230000	34	21000
Naphthalene (ug/kg)	400 - 574 cm	26	16	61.5	30	1.00E+06	63000	290 J	1.00E+06	0.47 U	1.00E+06	39000	83 J	2200
Phenanthrene (ug/kg)	23 - 199 cm	255	253	99.2	0.41 J	2.10E+06	36000	160	150000	0.41 J	2.10E+06	36000	160	150000
Phenanthrene (ug/kg)	200 - 399 cm	237	227	95.8	0.45 J	8.50E+06	110000	250	100000	0.37 U	8.50E+06	100000	210	100000
Phenanthrene (ug/kg)	400 - 574 cm	19	17	89.5	0.745 JT	460000 J	35000	850	460000 J	0.44 U	460000 J	31000	780	460000 J
Low Molecular Weight PAH (ug/kg)	23 - 199 cm	255	253	99.2	0.81 JT	8440000 T	130000	360 T	330000 T	0.81 JT	8440000 T	130000	355 T	330000 T
Low Molecular Weight PAH (ug/kg)	200 - 399 cm	237	232	97.9	0.45 JT	39900000 T	480000	458 T	223000 JT	0.45 JT	39900000 T	470000	442 T	223000 JT
Low Molecular Weight PAH (ug/kg)	400 - 574 cm	19	19	100.0	0.47 JT	1750000 JT	100000	1590 T	1750000 JT	0.47 JT	1750000 JT	100000	1590 T	1750000 JT

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

Analyte	Depth Interval	Number of Samples	Number Detected	% Detected	Detected Concentrations Minimum	Maximum	Mean	Median	95th	Detected and Nondetected Concentrations Minimum	Maximum	Mean	Median	95th
Dibenz(a,h)anthracene (ug/kg)	23 - 199 cm	255	242	94.9	0.4 J	30000	670	16 T	2100	0.29 U	30000	640	14	2100
Dibenz(a,h)anthracene (ug/kg)	200 - 399 cm	237	199	84.0	0.42 J	67000	1300	23	2700	0.29 U	67000	1100	14	2300 J
Dibenz(a,h)anthracene (ug/kg)	400 - 574 cm	19	18	94.7	0.4 JT	4300 J	420	39	4300 J	0.36 U	4300 J	390	39	4300 J
Benz(a)anthracene (ug/kg)	23 - 199 cm	255	252	98.8	0.42 J	280000	5600	88	21000	0.22 U	280000	5600	86	21000
Benz(a)anthracene (ug/kg)	200 - 399 cm	237	220	92.8	0.3 J	760000	12000	120	21000	0.18 U	760000	11000	93	21000
Benz(a)anthracene (ug/kg)	400 - 574 cm	19	17	89.5	1.07 JT	46000 J	4200	300	46000 J	0.22 U	46000 J	3800	250	46000 J
Benzo(a)pyrene (ug/kg)	23 - 199 cm	255	251	98.4	0.34 J	340000	6900	103 T	22000	0.32 U	340000	6700	98	22000
Benzo(a)pyrene (ug/kg)	200 - 399 cm	237	214	90.3	0.34 J	940000	15000	130	29000	0.25 U	940000	13000	100	27000
Benzo(a)pyrene (ug/kg)	400 - 574 cm	19	17	89.5	1.08 JT	71000 J	6400	380	71000 J	0.3 U	71000 J	5700	380	71000 J
Benzo(b)fluoranthene (ug/kg)	23 - 199 cm	255	247	96.9	0.91 J	230000	5400	110	17000 J	0.53 U	230000	5200	100	17000
Benzo(b)fluoranthene (ug/kg)	200 - 399 cm	237	208	87.8	0.72 J	590000 J	12000	130	21000 J	0.53 U	590000 J	10000	95 T	20000
Benzo(b)fluoranthene (ug/kg)	400 - 574 cm	19	17	89.5	1.3 JT	60000 J	5400	360	60000 J	0.64 U	60000 J	4800	360	60000 J
Benzo(g,h,i)perylene (ug/kg)	23 - 199 cm	255	251	98.4	0.37 J	280000	5300	92	19000	0.33 U	280000	5200	90	19000
Benzo(g,h,i)perylene (ug/kg)	200 - 399 cm	237	217	91.6	0.33 J	730000	11000	110	23000 J	0.26 U	730000	9800	89	23000 J
Benzo(g,h,i)perylene (ug/kg)	400 - 574 cm	19	18	94.7	0.34 J	55000 J	5000	340	55000 J	0.32 U	55000 J	4700	340	55000 J
Benzo(k)fluoranthene (ug/kg)	23 - 199 cm	255	245	96.1	0.48 J	190000	2800	56	13000 J	0.36 U	190000	2700	54 T	13000 J
Benzo(k)fluoranthene (ug/kg)	200 - 399 cm	237	201	84.8	0.48 J	540000	7200	70	11000	0.37 U	540000	6100	43	9400 J
Benzo(k)fluoranthene (ug/kg)	400 - 574 cm	19	16	84.2	15 J	18000 J	1800	110	18000 J	0.44 U	18000 J	1500	110	18000 J
Chrysene (ug/kg)	23 - 199 cm	255	250	98.0	0.51 J	390000	7000	130	26000	0.45 U	390000	6800	120	26000
Chrysene (ug/kg)	200 - 399 cm	237	209	88.2	0.63 J	980000	16000	190	26000	0.46 U	980000	14000	130	26000
Chrysene (ug/kg)	400 - 574 cm	19	17	89.5	1.6 JT	59000 J	5300	490	59000 J	0.55 U	59000 J	4700	320	59000 J
Fluoranthene (ug/kg)	23 - 199 cm	255	252	98.8	0.57 J	1.10E+06	22000	220	75000	0.51 U	1.10E+06	21000	220	75000
Fluoranthene (ug/kg)	200 - 399 cm	237	224	94.5	0.48 J	3.50E+06	51000	270	74000	0.38 U	3.50E+06	48000	230	74000
Fluoranthene (ug/kg)	400 - 574 cm	19	17	89.5	1.7 JT	250000 J	21000	870	250000 J	0.46 U	250000 J	19000	660	250000 J
Indeno(1,2,3-cd)pyrene (ug/kg)	23 - 199 cm	255	251	98.4	0.29 J	240000	4800	84.5 T	15000	0.29 J	240000	4800	81	15000
Indeno(1,2,3-cd)pyrene (ug/kg)	200 - 399 cm	237	214	90.3	0.38 J	610000	9800	92	20000	0.27 U	610000	8800	76	20000
Indeno(1,2,3-cd)pyrene (ug/kg)	400 - 574 cm	19	17	89.5	0.725 JT	49000 J	4600	330	49000 J	0.32 U	49000 J	4100	270	49000 J
Pyrene (ug/kg)	23 - 199 cm	255	252	98.8	0.69 J	1.30E+06	26000	240	90000	0.54 U	1.30E+06	25000	240	90000
Pyrene (ug/kg)	200 - 399 cm	237	222	93.7	0.51 J	4.70E+06	65000	340	90000	0.4 U	4.70E+06	61000	290	90000
Pyrene (ug/kg)	400 - 574 cm	19	17	89.5	2.45 T	320000 J	26000	1100	320000 J	0.48 U	320000 J	23000	1100	320000 J
High Molecular Weight PAH (ug/kg)	23 - 199 cm	255	253	99.2	1 JT	4380000 T	85000	1180 T	289000 T	0.72 UT	4380000 T	84000	1150	289000 T
High Molecular Weight PAH (ug/kg)	200 - 399 cm	237	227	95.8	0.48 JT	13400000 T	190000	1320 T	317000 T	0.48 JT	13400000 T	180000	1210	317000 T
High Molecular Weight PAH (ug/kg)	400 - 574 cm	19	18	94.7	0.77 JT	932000 JT	76000	3770 T	932000 JT	0.65 UT	932000 JT	72000	3770	932000 JT
Polycyclic Aromatic Hydrocarbons (ug/kg)	23 - 199 cm	255	253	99.2	2.5 JT	12820000 T	220000	1556 T	525000 T	0.88 UT	12820000 T	210000	1537 T	525000 T
Polycyclic Aromatic Hydrocarbons (ug/kg)	200 - 399 cm	237	232	97.9	0.5 JT	53300000 T	670000	1854 T	510000 JT	0.54 JT	53300000 T	650000	1777 T	510000 JT
Polycyclic Aromatic Hydrocarbons (ug/kg)	400 - 574 cm	19	19	100.0	0.9 JT	2682000 JT	170000	5750 T	253600 T	0.88 JT	2682000 JT	170000	5750 T	253600 T
Herbicides (ug/kg)														
Dalapon (ug/kg)	23 - 199 cm	72	0	0.0						0.586 U	1.15 U	0.78	0.754 U	1.01 U
Dalapon (ug/kg)	200 - 399 cm	63	0	0.0						0.6 U	1.05 U	0.76	0.736 U	0.92 U
Dalapon (ug/kg)	400 - 574 cm	5	0	0.0						0.765 U	0.863 U	0.81	0.813 U	0.863 U
Dicamba (ug/kg)	23 - 199 cm	72	0	0.0						2.1 U	4.11 U	2.8	2.71 U	3.62 U
Dicamba (ug/kg)	200 - 399 cm	63	0	0.0						2.15 U	3.78 U	2.7	2.64 U	3.3 U
Dicamba (ug/kg)	400 - 574 cm	5	0	0.0						2.74 U	3.1 U	2.9	2.92 U	3.1 U
MCPA (ug/kg)	23 - 199 cm	72	3	4.2	1.58	144	53	12.1 J	144	1.42 U	144	4	1.86 U	2.55 U
MCPA (ug/kg)	200 - 399 cm	63	0	0.0						1.45 U	2.55 U	1.8	1.78 U	2.23 U
MCPA (ug/kg)	400 - 574 cm	5	0	0.0						1.85 U	2.09 U	2	1.97 U	2.09 U
Dichloroprop (ug/kg)	23 - 199 cm	72	0	0.0						1.07 U	2.08 U	1.4	1.37 U	1.83 U
Dichloroprop (ug/kg)	200 - 399 cm	63	0	0.0						1.09 U	1.91 U	1.4	1.34 U	1.67 U
Dichloroprop (ug/kg)	400 - 574 cm	5	0	0.0						1.39 U	1.57 U	1.5	1.48 U	1.57 U
2,4-D (ug/kg)	23 - 199 cm	72	5	6.9	7.14	473	130	45.5 J	473	0.667 U	473	9.7	0.878 U	34.3 J
2,4-D (ug/kg)	200 - 399 cm	63	0	0.0						0.683 U	1.2 U	0.86	0.837 U	1.05 U
2,4-D (ug/kg)	400 - 574 cm	5	0	0.0						0.87 U	0.982 U	0.92	0.925 U	0.982 U
Silvex (ug/kg)	23 - 199 cm	72	0	0.0						0.978 U	1.91 U	1.3	1.26 U	1.68 U
Silvex (ug/kg)	200 - 399 cm	63	1	1.6	2.25 J	2.25 J	2.3	2.25 J	2.25 J	1 U	2.25 J	1.3	1.24 UT	1.61 U
Silvex (ug/kg)	400 - 574 cm	5	0	0.0						1.28 U	1.44 U	1.4	1.36 U	1.44 U

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

		Number	Number	%	Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	Depth Interval	of Samples	Detected	Detected	Minimum	Maximum	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th
2,4,5-T (ug/kg)	23 - 199 cm	72	0	0.0						0.975 U	1.9 U	1.3	1.25 U	1.68 U
2,4,5-T (ug/kg)	200 - 399 cm	63	0	0.0						0.998 U	1.75 U	1.3	1.22 U	1.53 U
2,4,5-T (ug/kg)	400 - 574 cm	5	0	0.0						1.27 U	1.43 U	1.3	1.35 U	1.43 U
2,4-DB (ug/kg)	23 - 199 cm	72	1	1.4	797	797	800	797	797	0.986 U	797	12	1.29 U	1.74 U
2,4-DB (ug/kg)	200 - 399 cm	63	0	0.0						1.01 U	1.77 U	1.3	1.24 U	1.55 U
2,4-DB (ug/kg)	400 - 574 cm	5	0	0.0						1.29 U	1.45 U	1.4	1.37 U	1.45 U
Dinoseb (ug/kg)	23 - 199 cm	72	0	0.0						1.35 U	2.63 U	1.8	1.73 U	2.32 U
Dinoseb (ug/kg)	200 - 399 cm	63	0	0.0						1.38 U	2.42 U	1.7	1.69 U	2.11 U
Dinoseb (ug/kg)	400 - 574 cm	5	0	0.0						1.76 U	1.98 U	1.9	1.87 U	1.98 U
MCPP (ug/kg)	23 - 199 cm	72	2	2.8	1.62	37.2	19	1.62	37.2	1.3 U	37.2	2.2	1.69 U	2.28 U
MCPP (ug/kg)	200 - 399 cm	63	0	0.0						1.33 U	2.33 U	1.7	1.63 U	2.03 U
MCPP (ug/kg)	400 - 574 cm	5	0	0.0						1.69 U	1.91 U	1.8	1.8 U	1.91 U
Dioxins/Furans (pg/g)														
Tetrachlorodibenzo-p-dioxin homologs (pg/g)	23 - 199 cm	61	57	93.4	0.015	185.67	5.8	0.545	34.58	0.003 U	185.67	5.4	0.482	13.725
Tetrachlorodibenzo-p-dioxin homologs (pg/g)	200 - 399 cm	55	41	74.5	0.027	6.226	1.3	0.267	4.621	0.004 U	6.226	0.95	0.086	4.621
Tetrachlorodibenzo-p-dioxin homologs (pg/g)	400 - 574 cm	3	3	100.0	0.23	6.748	3.7	4.057	6.748	0.23	6.748	3.7	4.057	6.748
Pentachlorodibenzo-p-dioxin homologs (pg/g)	23 - 199 cm	61	53	86.9	0.063	125.19	5	0.957	24.925	0.004 U	125.19	4.3	0.835	8.591
Pentachlorodibenzo-p-dioxin homologs (pg/g)	200 - 399 cm	55	31	56.4	0.016	7.043	2.4	1.857	6.175	0.003 U	7.043	1.3	0.051	5.954
Pentachlorodibenzo-p-dioxin homologs (pg/g)	400 - 574 cm	3	3	100.0	1.098	17.391	9.1	8.783	17.391	1.098	17.391	9.1	8.783	17.391
Hexachlorodibenzo-p-dioxin homologs (pg/g)	23 - 199 cm	61	61	100.0	0.036	348.007	16	6.395	35.246	0.036	348.007	16	6.395	35.246
Hexachlorodibenzo-p-dioxin homologs (pg/g)	200 - 399 cm	55	52	94.5	0.02	72.491	11	0.882	43.942	0.014 U	72.491	10	0.555	43.942
Hexachlorodibenzo-p-dioxin homologs (pg/g)	400 - 574 cm	3	3	100.0	7.03	47.752	32	42.447	47.752	7.03	47.752	32	42.447	47.752
Heptachlorodibenzo-p-dioxin homologs (pg/g)	23 - 199 cm	61	61	100.0	0.258	1367.61	94	44.936	236.868	0.258	1367.61	94	44.936	236.868
Heptachlorodibenzo-p-dioxin homologs (pg/g)	200 - 399 cm	55	53	96.4	0.12	423.567	68	2.186	282.904	0.041 U	423.567	65	2.139	282.904
Heptachlorodibenzo-p-dioxin homologs (pg/g)	400 - 574 cm	3	3	100.0	39.593	208.207	130	133.108	208.207	39.593	208.207	130	133.108	208.207
Octachlorodibenzo-p-dioxin (pg/g)	23 - 199 cm	61	52	85.2	1.054 J	1763.25 J	350	203.332	1048.61 J	0.8 U	1763.25 J	300	168 T	983.527
Octachlorodibenzo-p-dioxin (pg/g)	200 - 399 cm	55	31	56.4	0.499 J	1462.61 J	480	212.372	1430.34	0.365 U	1462.61 J	270	8.123	1426.63 J
Octachlorodibenzo-p-dioxin (pg/g)	400 - 574 cm	3	3	100.0	206.475	881.232 J	570	635.86 J	881.232 J	206.475	881.232 J	570	635.86 J	881.232 J
Tetrachlorodibenzofuran homologs (pg/g)	23 - 199 cm	61	58	95.1	0.021 T	3614.17	94	3.777	424.709	0.007 U	3614.17	89	3.468	264.151
Tetrachlorodibenzofuran homologs (pg/g)	200 - 399 cm	55	35	63.6	0.05	359.16	28	6.571	150 T	0.005 U	359.16	18	0.571	120.865
Tetrachlorodibenzofuran homologs (pg/g)	400 - 574 cm	3	3	100.0	4.977	44.641	30	41.005	44.641	4.977	44.641	30	41.005	44.641
Pentachlorodibenzofuran homologs (pg/g)	23 - 199 cm	61	58	95.1	0.023	1625.98	65	7.626	436.934	0.003 U	1625.98	62	7.483	207.744
Pentachlorodibenzofuran homologs (pg/g)	200 - 399 cm	55	38	69.1	0.01	566.208	38	8.484	185.536	0.004 U	566.208	27	0.646 T	181.521
Pentachlorodibenzofuran homologs (pg/g)	400 - 574 cm	3	3	100.0	12.477	141.973	90	116.159	141.973	12.477	141.973	90	116.159	141.973
Hexachlorodibenzofuran homologs (pg/g)	23 - 199 cm	61	59	96.7	0.025	860.812	49	13.45	278.995	0.008 U	860.812	47	13.052	175.377
Hexachlorodibenzofuran homologs (pg/g)	200 - 399 cm	55	45	81.8	0.014	592.373	38	2.652	143.691	0.007 U	592.373	31	0.596	143.691
Hexachlorodibenzofuran homologs (pg/g)	400 - 574 cm	3	3	100.0	22.468	226.528	140	165.158	226.528	22.468	226.528	140	165.158	226.528
Heptachlorodibenzofuran homologs (pg/g)	23 - 199 cm	61	59	96.7	0.052	532.414	44	18.719	169.618	0.006 U	532.414	42	17.921	144.513
Heptachlorodibenzofuran homologs (pg/g)	200 - 399 cm	55	44	80.0	0.012	380.549	41	5.222	135.615	0.007 U	380.549	33	0.667 T	135.615
Heptachlorodibenzofuran homologs (pg/g)	400 - 574 cm	3	3	100.0	36.262	423.165	240	261.723	423.165	36.262	423.165	240	261.723	423.165
Octachlorodibenzofuran (pg/g)	23 - 199 cm	61	49	80.3	0.044 J	351.1	36	16.691	138.369	0.044 J	351.1	29	10.829	101.835
Octachlorodibenzofuran (pg/g)	200 - 399 cm	55	28	50.9	0.014 J	296.814	47	15.057	123.702	0.008 U	296.814	24	0.476 U	107.614
Octachlorodibenzofuran (pg/g)	400 - 574 cm	3	3	100.0	10.785	129.224	85	113.805	129.224	10.785	129.224	85	113.805	129.224
2,3,7,8-Tetrachlorodibenzo-p-dioxin (pg/g)	23 - 199 cm	61	22	36.1	0.035 J	42.212	2.8	0.208	12.254	0.003 U	42.212	1	0.052 J	1.66
2,3,7,8-Tetrachlorodibenzo-p-dioxin (pg/g)	200 - 399 cm	55	12	21.8	0.066 J	2.08 T	0.53	0.262	2.08 T	0.002 U	2.08 T	0.14	0.019 UT	0.849
2,3,7,8-Tetrachlorodibenzo-p-dioxin (pg/g)	400 - 574 cm	3	1	33.3	0.297	0.297	0.3	0.297	0.297	0.015 U	0.297	0.16	0.172 U	0.297
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (pg/g)	23 - 199 cm	61	37	60.7	0.036 J	58.293	2.1	0.166 J	12.191	0.004 U	58.293	1.3	0.113 J	0.947 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (pg/g)	200 - 399 cm	55	20	36.4	0.023 J	1.68 T	0.43	0.351 J	1.132	0.003 U	1.68 T	0.17	0.023 J	0.889 J
1,2,3,7,8-Pentachlorodibenzo-p-dioxin (pg/g)	400 - 574 cm	3	2	66.7	0.11 J	1.461	0.79	0.11 J	1.461	0.11 J	1.461	0.7	0.52 U	1.461
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (pg/g)	23 - 199 cm	61	39	63.9	0.017 J	3.872	0.36	0.167 J	2.019	0.003 U	3.91 U	0.32	0.127 U	1.008
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (pg/g)	200 - 399 cm	55	19	34.5	0.036 JT	0.956 J	0.36	0.346 J	0.956 J	0.003 U	0.956 J	0.16	0.03 U	0.851 J
1,2,3,4,7,8-Hexachlorodibenzo-p-dioxin (pg/g)	400 - 574 cm	3	2	66.7	0.098 J	0.469 J	0.28	0.098 J	0.469 J	0.033 U	0.469 J	0.2	0.098 J	0.469 J
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (pg/g)	23 - 199 cm	61	51	83.6	0.024 J	30.998	2.2	1.24 JT	5.021	0.004 U	30.998	1.9	0.932	4.848
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (pg/g)	200 - 399 cm	55	32	58.2	0.008 J	6.849	2	0.984 J	5.744	0.004 U	6.849	1.2	0.052 J	5.152
1,2,3,6,7,8-Hexachlorodibenzo-p-dioxin (pg/g)	400 - 574 cm	3	3	100.0	0.911 J	6.169	3.9	4.702	6.169	0.911 J	6.169	3.9	4.702	6.169

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

		Number	Number	%	Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	Depth Interval	of Samples	Detected	Detected	Minimum	Maximum	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (pg/g)	23 - 199 cm	61	46	75.4	0.018 J	8.931	0.97	0.377 J	2.722	0.004 UT	8.931	0.75	0.301 JT	2.222
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (pg/g)	200 - 399 cm	55	31	56.4	0.013 J	2.811	0.93	0.519 J	2.646	0.005 U	2.811	0.53	0.05 J	2.633
1,2,3,7,8,9-Hexachlorodibenzo-p-dioxin (pg/g)	400 - 574 cm	3	3	100.0	0.205 J	2.512	1.2	1.028	2.512	0.205 J	2.512	1.2	1.028	2.512
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (pg/g)	23 - 199 cm	61	53	86.9	0.142 J	224.298	35	23.872	100.209	0.117 U	224.298	31	18.4 T	91.404
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (pg/g)	200 - 399 cm	55	32	58.2	0.053 J	187.165	48	18.643	148.846	0.041 U	187.165	28	0.816 J	125.398
1,2,3,4,6,7,8-Heptachlorodibenzo-p-dioxin (pg/g)	400 - 574 cm	3	3	100.0	13.425	76.912	50	59.379	76.912	13.425	76.912	50	59.379	76.912
2,3,7,8-Tetrachlorodibenzofuran (pg/g)	23 - 199 cm	61	37	60.7	0.148 J	203.81	16	1.213	155.287	0.005 UT	203.81	9.7	0.366	44.889
2,3,7,8-Tetrachlorodibenzofuran (pg/g)	200 - 399 cm	55	22	40.0	0.095 J	195.608	23	1.348	134.82	0.005 U	195.608	9.2	0.146 J	53.776
2,3,7,8-Tetrachlorodibenzofuran (pg/g)	400 - 574 cm	3	2	66.7	0.785	6.994	3.9	0.785	6.994	0.146 U	6.994	2.6	0.785	6.994
1,2,3,7,8-Pentachlorodibenzofuran (pg/g)	23 - 199 cm	61	44	72.1	0.042 J	243.423	9.5	0.419 J	29.972	0.003 U	260.918 U	12	0.318 J	32.611
1,2,3,7,8-Pentachlorodibenzofuran (pg/g)	200 - 399 cm	55	26	47.3	0.016 J	207.475	15	0.427 J	69.78	0.003 U	207.475	7.7	0.037 U	58.624
1,2,3,7,8-Pentachlorodibenzofuran (pg/g)	400 - 574 cm	3	2	66.7	0.126 J	10.948	5.5	0.126 J	10.948	0.126 J	10.948	4.2	1.642 U	10.948
2,3,4,7,8-Pentachlorodibenzofuran (pg/g)	23 - 199 cm	61	50	82.0	0.025 J	114.654	6.2	0.342 JT	24.057	0.003 U	114.654	5.1	0.278 J	20.196
2,3,4,7,8-Pentachlorodibenzofuran (pg/g)	200 - 399 cm	55	28	50.9	0.024 J	85.932	6.7	0.687 J	33.791	0.003 U	85.932	3.4	0.042 J	29.47
2,3,4,7,8-Pentachlorodibenzofuran (pg/g)	400 - 574 cm	3	3	100.0	0.193 J	4.628	2.1	1.598	4.628	0.193 J	4.628	2.1	1.598	4.628
1,2,3,4,7,8-Hexachlorodibenzofuran (pg/g)	23 - 199 cm	61	44	72.1	0.016 J	464.247	24	1.54 T	93.841	0.008 U	464.247	18	0.923	64.257
1,2,3,4,7,8-Hexachlorodibenzofuran (pg/g)	200 - 399 cm	55	30	54.5	0.014 J	330.269	21	1.794	105.856	0.007 U	330.269	12	0.093 UT	58.894
1,2,3,4,7,8-Hexachlorodibenzofuran (pg/g)	400 - 574 cm	3	3	100.0	0.441 J	23.75	9.3	3.598	23.75	0.441 J	23.75	9.3	3.598	23.75
1,2,3,6,7,8-Hexachlorodibenzofuran (pg/g)	23 - 199 cm	61	50	82.0	0.014 J	149.333	7.3	0.915	36.253	0.003 UT	149.333	6	0.583 J	20.381
1,2,3,6,7,8-Hexachlorodibenzofuran (pg/g)	200 - 399 cm	55	27	49.1	0.039 J	97.019	7.3	1.619	31.155	0.003 U	97.019	3.6	0.059 JT	14.565
1,2,3,6,7,8-Hexachlorodibenzofuran (pg/g)	400 - 574 cm	3	3	100.0	1.65 J	12.285	7.8	9.447	12.285	1.65 J	12.285	7.8	9.447	12.285
1,2,3,7,8,9-Hexachlorodibenzofuran (pg/g)	23 - 199 cm	61	14	23.0	0.011 JT	5.452 J	1	0.226 J	5.452 J	0.003 UT	5.452 J	0.28	0.027 U	1.123
1,2,3,7,8,9-Hexachlorodibenzofuran (pg/g)	200 - 399 cm	55	11	20.0	0.044 J	7.905	2.2	0.54 J	7.905	0.002 U	7.905	0.46	0.018 U	4.762
1,2,3,7,8,9-Hexachlorodibenzofuran (pg/g)	400 - 574 cm	3	1	33.3	3.79	3.79	3.8	3.79	3.79	0.041 U	3.79	1.3	0.146 U	3.79
2,3,4,6,7,8-Hexachlorodibenzofuran (pg/g)	23 - 199 cm	61	47	77.0	0.061 J	27.563	2.1	0.593 J	8.156	0.003 U	27.563	1.7	0.433 U	5.683
2,3,4,6,7,8-Hexachlorodibenzofuran (pg/g)	200 - 399 cm	55	24	43.6	0.043 J	15.019	1.9	0.943 J	5.636	0.002 U	15.019	0.85	0.039 U	3.664
2,3,4,6,7,8-Hexachlorodibenzofuran (pg/g)	400 - 574 cm	3	3	100.0	0.362 J	4.816	2.5	2.319	4.816	0.362 J	4.816	2.5	2.319	4.816
1,2,3,4,6,7,8-Heptachlorodibenzofuran (pg/g)	23 - 199 cm	61	52	85.2	0.026 J	241.889	20	8.198	74.267	0.018 U	241.889	17	6.17	65.728
1,2,3,4,6,7,8-Heptachlorodibenzofuran (pg/g)	200 - 399 cm	55	30	54.5	0.01 J	168.317	23	12.328	61.441	0.007 U	168.317	12	0.216 U	55.043
1,2,3,4,6,7,8-Heptachlorodibenzofuran (pg/g)	400 - 574 cm	3	3	100.0	18.693	235.108	130	124.501	235.108	18.693	235.108	130	124.501	235.108
1,2,3,4,7,8,9-Heptachlorodibenzofuran (pg/g)	23 - 199 cm	61	38	62.3	0.055 J	99.977	5.5	0.693 J	23.351	0.005 UT	99.977	3.5	0.361 J	12.005
1,2,3,4,7,8,9-Heptachlorodibenzofuran (pg/g)	200 - 399 cm	55	22	40.0	0.02 J	62.976	5.6	1.162	19.224	0.004 U	62.976	2.3	0.051 U	8.676
1,2,3,4,7,8,9-Heptachlorodibenzofuran (pg/g)	400 - 574 cm	3	1	33.3	4.423	4.423	4.4	4.423	4.423	0.168 U	4.423	1.9	1.081 U	4.423
2,3,7,8-TCDD TEQ (pg/g)	23 - 199 cm	61	59	96.7	0.0014 JT	200 T	9.8	1.34 JT	54.7 T	0 UT	200 T	9.5	1.29 JT	54.7 T
2,3,7,8-TCDD TEQ (pg/g)	200 - 399 cm	55	46	83.6	0.00053 JT	118 T	11	0.284 JT	37 JT	0 UT	118 T	5.5	0.0867 JT	37 JT
2,3,7,8-TCDD TEQ (pg/g)	400 - 574 cm	3	3	100.0	0.922 JT	13.7 JT	6.6	5.15 JT	13.7 JT	0.922 JT	13.7 JT	6.6	5.15 JT	13.7 JT
Volatile Organic Compounds (ug/kg)														
1,1,1,2-Tetrachloroethane (ug/kg)	23 - 199 cm	108	0	0.0						0.038 U	1800 U	55	0.055 U	95 U
1,1,1,2-Tetrachloroethane (ug/kg)	200 - 399 cm	142	0	0.0						0.036 U	7800 U	120	0.046 U	52 U
1,1,1,2-Tetrachloroethane (ug/kg)	400 - 574 cm	20	0	0.0						0.041 U	0.056 U	0.047	0.047 U	0.053 U
1,1,1-Trichloroethane (ug/kg)	23 - 199 cm	108	0	0.0						0.071 UT	1800 U	55	0.11 U	95 U
1,1,1-Trichloroethane (ug/kg)	200 - 399 cm	142	0	0.0						0.068 U	7800 U	120	0.087 U	52 U
1,1,1-Trichloroethane (ug/kg)	400 - 574 cm	20	0	0.0						0.077 U	0.11 U	0.091	0.089 U	0.11 U
1,1,2,2-Tetrachloroethane (ug/kg)	23 - 199 cm	108	3	2.8	0.18 J	0.38 J	0.27	0.25 J	0.38 J	0.12 U	2200 U	69	0.18 U	120 U
1,1,2,2-Tetrachloroethane (ug/kg)	200 - 399 cm	142	6	4.2	0.19 J	7.3	2.1	0.68 J	7.3	0.11 U	9700 U	150	0.15 UT	65 U
1,1,2,2-Tetrachloroethane (ug/kg)	400 - 574 cm	20	4	20.0	0.79 J	8.7	3.6	1.6	8.7	0.13 U	8.7	0.83	0.15 U	3.2
1,1,2-Trichloroethane (ug/kg)	23 - 199 cm	108	0	0.0						0.071 UT	1600 U	50	0.11 U	85 U
1,1,2-Trichloroethane (ug/kg)	200 - 399 cm	142	0	0.0						0.068 U	7000 U	110	0.087 U	47 U
1,1,2-Trichloroethane (ug/kg)	400 - 574 cm	20	0	0.0						0.077 U	0.11 U	0.091	0.089 U	0.11 U
1,1-Dichloroethane (ug/kg)	23 - 199 cm	108	0	0.0						0.069 UT	1500 U	46	0.1 U	78 U
1,1-Dichloroethane (ug/kg)	200 - 399 cm	142	11	7.7	0.095 JT	0.43 JT	0.27	0.31 J	0.43 JT	0.065 U	6400 U	100	0.086 U	43 U
1,1-Dichloroethane (ug/kg)	400 - 574 cm	20	0	0.0						0.075 U	0.11 U	0.087	0.086 U	0.098 U
Vinylidene chloride (ug/kg)	23 - 199 cm	108	0	0.0						0.099 UT	1900 U	60	0.15 U	110 U
Vinylidene chloride (ug/kg)	200 - 399 cm	142	0	0.0						0.094 U	8400 U	130	0.12 U	56 U
Vinylidene chloride (ug/kg)	400 - 574 cm	20	0	0.0						0.11 U	0.15 U	0.13	0.13 U	0.15 U

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

		Number	Number	%	Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	Depth Interval	of Samples	Detected	Detected	Minimum	Maximum	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th
1,2,3-Trichloropropane (ug/kg)	23 - 199 cm	108	0	0.0						0.14 U	3400 U	110	0.2 U	190 U
1,2,3-Trichloropropane (ug/kg)	200 - 399 cm	142	3	2.1	0.77 J	3.7	2.1	1.9	3.7	0.13 U	15000 U	240	0.17 U	99 U
1,2,3-Trichloropropane (ug/kg)	400 - 574 cm	20	2	10.0	0.38 J	0.88 J	0.63	0.38 J	0.88 J	0.15 U	0.88 J	0.22	0.18 U	0.38 J
1,2-Dichloroethane (ug/kg)	23 - 199 cm	108	0	0.0						0.038 U	1800 U	57	0.055 U	98 U
1,2-Dichloroethane (ug/kg)	200 - 399 cm	142	5	3.5	0.055 J	0.22 J	0.14	0.15 J	0.22 J	0.036 U	8000 U	130	0.046 U	53 U
1,2-Dichloroethane (ug/kg)	400 - 574 cm	20	0	0.0						0.041 U	0.056 U	0.047	0.047 U	0.053 U
1,2-Dichloropropane (ug/kg)	23 - 199 cm	108	0	0.0						0.043 U	2000 U	62	0.062 U	110 U
1,2-Dichloropropane (ug/kg)	200 - 399 cm	142	0	0.0						0.04 U	8700 U	140	0.052 U	58 U
1,2-Dichloropropane (ug/kg)	400 - 574 cm	20	0	0.0						0.046 U	0.063 U	0.053	0.053 U	0.06 U
Methylethyl ketone (ug/kg)	23 - 199 cm	68	68	100.0	1.5 J	14 J	4.7	3.8 J	10.3 JT	1.5 J	14 J	4.7	3.8 J	10.3 JT
Methylethyl ketone (ug/kg)	200 - 399 cm	80	80	100.0	2 J	31 J	5	3.5 J	11 J	2 J	31 J	5	3.5 J	11 J
Methylethyl ketone (ug/kg)	400 - 574 cm	15	15	100.0	1.6 J	13 J	5.2	4.1 J	13 J	1.6 J	13 J	5.2	4.1 J	13 J
2-Chloroethyl vinyl ether (ug/kg)	23 - 199 cm	108	0	0.0						0.19 U	1800 U	56	0.27 U	96 UJ
2-Chloroethyl vinyl ether (ug/kg)	200 - 399 cm	142	0	0.0						0.18 U	7900 UJ	130	0.22 U	53 U
2-Chloroethyl vinyl ether (ug/kg)	400 - 574 cm	20	0	0.0						0.2 U	0.27 U	0.23	0.23 U	0.26 U
Methyl N-butyl ketone (ug/kg)	23 - 199 cm	93	1	1.1	6.2	6.2	6.2	6.2	6.2	0.77 UT	6.2	1.2	1.1 U	1.3 U
Methyl N-butyl ketone (ug/kg)	200 - 399 cm	132	0	0.0						0.73 U	1.3 U	0.97	0.93 U	1.2 U
Methyl N-butyl ketone (ug/kg)	400 - 574 cm	19	0	0.0						0.84 U	1.2 U	0.98	0.97 U	1.2 U
Methyl isobutyl ketone (ug/kg)	23 - 199 cm	94	0	0.0						0.29 UT	5000 U	54	0.41 U	0.48 U
Methyl isobutyl ketone (ug/kg)	200 - 399 cm	132	3	2.3	0.36 JT	1.9	0.91	0.48 J	1.9	0.28 U	1.9	0.37	0.35 U	0.43 U
Methyl isobutyl ketone (ug/kg)	400 - 574 cm	19	0	0.0						0.32 U	0.43 U	0.37	0.37 U	0.43 U
Acetone (ug/kg)	23 - 199 cm	98	19	19.4	7.4 J	66	29	24	66	2.1 U	35000 UJ	620	21 U	460 UJ
Acetone (ug/kg)	200 - 399 cm	133	26	19.5	3.6 J	110	33	28	100	2.2 UT	480 UJ	24	17 U	51
Acetone (ug/kg)	400 - 574 cm	19	3	15.8	34	52	43	43	52	5.4 U	52	21	17 U	52
Acrolein (ug/kg)	23 - 199 cm	8	1	12.5	0.86 J	0.86 J	0.86	0.86 J	0.86 J	0.7 U	1.1 U	0.93	0.95 U	1.1 U
Acrolein (ug/kg)	200 - 399 cm	11	2	18.2	0.84 J	1.4 J	1.1	0.84 J	1.4 J	0.63 U	1.4 J	0.84	0.81 U	1.4 J
Acrylonitrile (ug/kg)	23 - 199 cm	107	0	0.0						0.28 U	2600 U	81	0.41 U	140 U
Acrylonitrile (ug/kg)	200 - 399 cm	141	0	0.0						0.27 U	12000 U	190	0.34 UJ	27 U
Acrylonitrile (ug/kg)	400 - 574 cm	20	0	0.0						0.3 U	0.42 U	0.35	0.35 U	0.4 U
Benzene (ug/kg)	23 - 199 cm	108	42	38.9	0.069 JT	70000	2600	0.31 J	11000	0.054 U	70000	1000	0.089 J	1100
Benzene (ug/kg)	200 - 399 cm	142	76	53.5	0.045 J	270000	9400	0.19 J	94000	0.045 J	270000	5100	0.11 J	140 J
Benzene (ug/kg)	400 - 574 cm	20	12	60.0	0.069 J	28000	2300	0.3 J	28000	0.053 U	28000	1400	0.082 J	2.7
Bromochloromethane (ug/kg)	23 - 199 cm	108	0	0.0						0.073 U	2000 U	62	0.11 U	110 U
Bromochloromethane (ug/kg)	200 - 399 cm	142	0	0.0						0.069 U	8900 U	140	0.088 U	59 U
Bromochloromethane (ug/kg)	400 - 574 cm	20	0	0.0						0.079 U	0.11 U	0.093	0.091 U	0.11 U
Bromodichloromethane (ug/kg)	23 - 199 cm	108	0	0.0						0.082 UT	1400 U	42	0.12 U	73 U
Bromodichloromethane (ug/kg)	200 - 399 cm	142	0	0.0						0.078 U	6000 U	95	0.1 U	40 U
Bromodichloromethane (ug/kg)	400 - 574 cm	20	0	0.0						0.089 U	0.13 U	0.11	0.11 U	0.12 U
Bromoform (ug/kg)	23 - 199 cm	108	0	0.0						0.056 U	4400 U	140	0.081 U	240 U
Bromoform (ug/kg)	200 - 399 cm	142	0	0.0						0.053 U	20000 U	310	0.068 U	130 UJ
Bromoform (ug/kg)	400 - 574 cm	20	0	0.0						0.06 U	0.083 U	0.07	0.07 U	0.079 U
Bromomethane (ug/kg)	23 - 199 cm	108	0	0.0						0.45 U	3500 U	110	0.65 U	190 U
Bromomethane (ug/kg)	200 - 399 cm	142	0	0.0						0.43 U	16000 U	250	0.55 U	130 U
Bromomethane (ug/kg)	400 - 574 cm	20	0	0.0						0.49 U	0.67 U	0.57	0.56 U	0.64 U
Carbon disulfide (ug/kg)	23 - 199 cm	108	18	16.7	0.2 J	850	48	0.38 J	850	0.16 U	2500 U	87	0.24 U	280 U
Carbon disulfide (ug/kg)	200 - 399 cm	142	18	12.7	0.18 J	1.1	0.31	0.25 JT	1.1	0.15 U	12000 U	180	0.2 U	74 U
Carbon disulfide (ug/kg)	400 - 574 cm	20	1	5.0	0.54 J	0.54 J	0.54	0.54 J	0.54 J	0.17 U	0.54 J	0.23	0.21 U	0.29 U
Carbon tetrachloride (ug/kg)	23 - 199 cm	108	0	0.0						0.12 U	2000 U	62	0.18 U	110 U
Carbon tetrachloride (ug/kg)	200 - 399 cm	142	0	0.0						0.12 U	8600 U	140	0.15 U	58 U
Carbon tetrachloride (ug/kg)	400 - 574 cm	20	0	0.0						0.13 U	0.18 U	0.16	0.15 U	0.17 U
Chlorobenzene (ug/kg)	23 - 199 cm	108	15	13.9	0.19 J	5700	380	0.79 J	5700	0.085 U	5700	99	0.13 U	170 U
Chlorobenzene (ug/kg)	200 - 399 cm	142	20	14.1	0.18 J	6600	330	2	7.9	0.08 U	6600 U	150	0.11 U	130 U
Chlorobenzene (ug/kg)	400 - 574 cm	20	0	0.0						0.092 U	0.13 U	0.11	0.11 U	0.12 U

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

					Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	Depth Interval	Number of Samples	Number Detected	% Detected	Minimum	Maximum	Mean	Median	95th	Minimum	Maximum	Mean	Median	95th
Chlorodibromomethane (ug/kg)	23 - 199 cm	108	0	0.0						0.082 UT	1300 U	40	0.12 U	70 U
Chlorodibromomethane (ug/kg)	200 - 399 cm	142	0	0.0						0.078 U	5800 U	92	0.1 U	38 U
Chlorodibromomethane (ug/kg)	400 - 574 cm	20	0	0.0						0.089 U	0.13 U	0.11	0.11 U	0.12 U
Chloroethane (ug/kg)	23 - 199 cm	108	0	0.0						0.34 U	2800 U	87	0.5 U	150 U
Chloroethane (ug/kg)	200 - 399 cm	142	1	0.7	0.9	0.9	0.9	0.9	0.9	0.32 U	13000 U	200	0.41 U	81 U
Chloroethane (ug/kg)	400 - 574 cm	20	0	0.0						0.37 U	0.51 U	0.43	0.43 U	0.48 U
Chloroform (ug/kg)	23 - 199 cm	108	2	1.9	0.078 J	0.11 J	0.094	0.078 J	0.11 J	0.068 U	1600 U	48	0.099 U	82 U
Chloroform (ug/kg)	200 - 399 cm	142	10	7.0	0.093 J	120 J	13	0.18 J	120 J	0.064 U	6700 U	110	0.085 U	120 J
Chloroform (ug/kg)	400 - 574 cm	20	1	5.0	0.088 J	0.088 J	0.088	0.088 J	0.088 J	0.073 U	0.11 U	0.086	0.087 U	0.096 U
Chloromethane (ug/kg)	23 - 199 cm	108	0	0.0						0.23 UT	2200 UJ	69	0.34 U	120 U
Chloromethane (ug/kg)	200 - 399 cm	142	1	0.7	0.86	0.86	0.86	0.86	0.86	0.22 U	9600 U	150	0.28 U	64 UJ
Chloromethane (ug/kg)	400 - 574 cm	20	0	0.0						0.25 U	0.34 U	0.29	0.29 U	0.33 U
cis-1,3-Dichloropropene (ug/kg)	23 - 199 cm	108	0	0.0						0.038 U	1300 U	40	0.055 U	70 U
cis-1,3-Dichloropropene (ug/kg)	200 - 399 cm	142	0	0.0						0.036 U	5700 U	90	0.046 U	38 U
cis-1,3-Dichloropropene (ug/kg)	400 - 574 cm	20	0	0.0						0.041 U	0.056 U	0.047	0.047 U	0.053 U
Methylene bromide (ug/kg)	23 - 199 cm	108	0	0.0						0.099 UT	1600 U	49	0.15 U	84 U
Methylene bromide (ug/kg)	200 - 399 cm	142	0	0.0						0.094 U	6900 U	110	0.12 U	46 U
Methylene bromide (ug/kg)	400 - 574 cm	20	0	0.0						0.11 U	0.15 U	0.13	0.13 U	0.15 U
Dichlorodifluoromethane (ug/kg)	23 - 199 cm	108	0	0.0						0.14 U	2700 U	83	0.2 U	150 U
Dichlorodifluoromethane (ug/kg)	200 - 399 cm	142	0	0.0						0.13 U	12000 U	190	0.17 U	78 U
Dichlorodifluoromethane (ug/kg)	400 - 574 cm	20	0	0.0						0.15 U	0.2 U	0.17	0.17 U	0.19 U
Ethylbenzene (ug/kg)	23 - 199 cm	108	26	24.1	0.13 J	31000	4000	64 J	28000	0.086 UT	31000	970	0.13 U	5700
Ethylbenzene (ug/kg)	200 - 399 cm	142	34	23.9	0.098 J	140000	13000	4.3	110000	0.081 U	140000	3100	0.11 U	2100
Ethylbenzene (ug/kg)	400 - 574 cm	20	4	20.0	0.13 J	9900	2500	0.32 J	9900	0.093 U	9900	500	0.11 U	7.9
Methyl iodide (ug/kg)	23 - 199 cm	108	0	0.0						0.81 UT	3600 UJ	120	1.2 UJ	200 UJ
Methyl iodide (ug/kg)	200 - 399 cm	142	1	0.7	7100 J	7100 J	7100	7100 J	7100 J	0.77 U	16000 UJ	260	0.98 U	160 UJ
Methyl iodide (ug/kg)	400 - 574 cm	20	0	0.0						0.88 UJ	1.2 U	1	1.1 U	1.2 UJ
Isopropylbenzene (ug/kg)	23 - 199 cm	108	37	34.3	0.079 J	3400 J	440	15	3300 J	0.053 UT	3400 J	150	0.083 U	1300 J
Isopropylbenzene (ug/kg)	200 - 399 cm	142	43	30.3	0.063 J	19000 J	1000	3.9	4900 J	0.051 U	19000 J	300	0.071 U	450 J
Isopropylbenzene (ug/kg)	400 - 574 cm	20	4	20.0	0.68 J	4500 J	1100	1.1	4500 J	0.058 U	4500 J	230	0.072 U	2.4
m,p-Xylene (ug/kg)	23 - 199 cm	108	24	22.2	0.3 J	34000	3100	31	24000	0.16 U	34000	690	0.24 U	1600
m,p-Xylene (ug/kg)	200 - 399 cm	142	32	22.5	0.21 J	200000	14000	2	99000	0.15 U	200000	3200	0.21 U	93 J
m,p-Xylene (ug/kg)	400 - 574 cm	20	1	5.0	20000	20000	20000	20000	20000	0.17 U	20000	1000	0.21 U	0.92 U
Methylene chloride (ug/kg)	23 - 199 cm	108	7	6.5	0.88 J	37 J	8.5	2.6 J	37 J	0.51 U	3100 U	99	2.5 U	180 U
Methylene chloride (ug/kg)	200 - 399 cm	142	6	4.2	0.98 J	290 J	50	1.6 J	290 J	0.38 U	14000 U	220	2.4 U	90 U
Methylene chloride (ug/kg)	400 - 574 cm	20	1	5.0	1.4 J	1.4 J	1.4	1.4 J	1.4 J	0.45 U	4.5 U	1.6	0.95 U	4.3 U
Methyl tert-butyl ether (ug/kg)	23 - 199 cm	108	33	30.6	0.076 JT	1.6	0.3	0.23 J	1.2	0.052 U	1200 U	36	0.08 U	63 U
Methyl tert-butyl ether (ug/kg)	200 - 399 cm	142	62	43.7	0.074 J	14	0.56	0.22 J	1.1	0.051 U	5200 U	83	0.095 J	35 U
Methyl tert-butyl ether (ug/kg)	400 - 574 cm	20	1	5.0	0.24 J	0.24 J	0.24	0.24 J	0.24 J	0.051 U	0.6 U	0.16	0.064 U	0.45 U
o-Xylene (ug/kg)	23 - 199 cm	108	33	30.6	0.11 J	15000	1300	14	11000	0.091 U	15000	390	0.15 U	2400
o-Xylene (ug/kg)	200 - 399 cm	142	36	25.4	0.13 J	80000	5600	1.7	48000	0.086 U	80000	1400	0.13 U	340
o-Xylene (ug/kg)	400 - 574 cm	20	3	15.0	1.8	7400	2500	2.2	7400	0.098 U	7400	370	0.12 U	2.2
Styrene (ug/kg)	23 - 199 cm	108	0	0.0						0.089 UT	1500 U	46	0.14 U	81 U
Styrene (ug/kg)	200 - 399 cm	142	3	2.1	0.15 J	22000	7800	1500 J	22000	0.085 U	22000	250	0.12 U	65 U
Styrene (ug/kg)	400 - 574 cm	20	0	0.0						0.097 U	0.82 U	0.27	0.26 U	0.42 U
Tetrachloroethene (ug/kg)	23 - 199 cm	108	0	0.0						0.12 U	1800 U	55	0.17 U	94 U
Tetrachloroethene (ug/kg)	200 - 399 cm	142	3	2.1	0.7 J	1	0.88	0.93	1	0.11 U	7700 U	120	0.15 U	51 U
Tetrachloroethene (ug/kg)	400 - 574 cm	20	0	0.0						0.13 U	0.18 U	0.15	0.15 U	0.17 U
Toluene (ug/kg)	23 - 199 cm	108	13	12.0	0.34 J	5000 J	670	25 J	5000 J	0.19 U	5000 J	110	0.27 U	190 J
Toluene (ug/kg)	200 - 399 cm	142	23	16.2	0.29 J	190000	17000	2.2	87000	0.18 U	190000	2800	0.23 U	46 U
Toluene (ug/kg)	400 - 574 cm	20	4	20.0	0.22 J	8800	2200	0.35 J	8800	0.2 U	8800	440	0.24 U	0.38 J
trans-1,2-Dichloroethene (ug/kg)	23 - 199 cm	108	0	0.0						0.23 UT	2200 U	70	0.34 U	120 U
trans-1,2-Dichloroethene (ug/kg)	200 - 399 cm	142	1	0.7	0.44 J	0.44 J	0.44	0.44 J	0.44 J	0.22 U	9800 U	150	0.28 U	65 U
trans-1,2-Dichloroethene (ug/kg)	400 - 574 cm	20	0	0.0						0.25 U	0.34 U	0.29	0.29 U	0.33 U

Table 4-14. Summary Statistics of Chemical Concentrations in Subsurface Sediment Samples Sorted by Sample End Depths.

		Number	Number	%	Detected Concentrations					Detected and Nondetected Concentrations				
Analyte	**Depth Interval**	**of Samples**	**Detected**	**Detected**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th**	**Minimum**	**Maximum**	**Mean**	**Median**	**95th**
trans-1,3-Dichloropropene (ug/kg)	23 - 199 cm	108	0	0.0						0.053 UT	1400 U	43	0.078 U	74 U
trans-1,3-Dichloropropene (ug/kg)	200 - 399 cm	142	0	0.0						0.051 U	6100 U	96	0.065 U	41 U
trans-1,3-Dichloropropene (ug/kg)	400 - 574 cm	20	0	0.0						0.058 U	0.079 U	0.067	0.067 U	0.076 U
1,4-Dichloro-trans-2-butene (ug/kg)	23 - 199 cm	103	0	0.0						0.62 U	9400 U	170	0.89 U	120 U
1,4-Dichloro-trans-2-butene (ug/kg)	200 - 399 cm	141	0	0.0						0.59 U	42000 U	670	0.75 U	280 U
1,4-Dichloro-trans-2-butene (ug/kg)	400 - 574 cm	20	0	0.0						0.67 U	0.92 U	0.78	0.77 U	0.88 U
Trichloroethene (ug/kg)	23 - 199 cm	108	29	26.9	0.19 J	1.90E+06	66000	0.4 J	1.5	0.081 U	1.90E+06	18000	0.12 U	170 U
Trichloroethene (ug/kg)	200 - 399 cm	142	70	49.3	0.11 J	300000	4300	0.53 J	1.6	0.076 U	300000	2300	0.17 J	88 U
Trichloroethene (ug/kg)	400 - 574 cm	20	4	20.0	0.29 J	1.6	0.76	0.52 J	1.6	0.081 U	1.6	0.23	0.11 U	0.64 J
Trichlorofluoromethane (ug/kg)	23 - 199 cm	108	0	0.0						0.098 UT	2100 U	65	0.15 UT	120 U
Trichlorofluoromethane (ug/kg)	200 - 399 cm	142	0	0.0						0.093 U	9200 U	150	0.12 U	61 U
Trichlorofluoromethane (ug/kg)	400 - 574 cm	20	0	0.0						0.11 U	0.15 U	0.13	0.13 U	0.14 U
Vinyl acetate (ug/kg)	23 - 199 cm	42	0	0.0						0.44 U	0.83 U	0.62	0.64 UT	0.72 U
Vinyl acetate (ug/kg)	200 - 399 cm	58	0	0.0						0.41 U	0.66 U	0.54	0.54 U	0.65 U
Vinyl acetate (ug/kg)	400 - 574 cm	1	0	0.0						0.49 U	0.49 U	0.49	0.49 U	0.49 U
Vinyl chloride (ug/kg)	23 - 199 cm	108	3	2.8	0.15 J	4000 J	1300	0.4 J	4000 J	0.11 U	4000 J	120	0.15 U	190 U
Vinyl chloride (ug/kg)	200 - 399 cm	142	5	3.5	0.14 J	2.8	0.84	0.24 J	2.8	0.097 U	15000 U	240	0.13 U	99 U
Vinyl chloride (ug/kg)	400 - 574 cm	20	0	0.0						0.12 U	0.16 U	0.14	0.13 U	0.15 U
Ethylene dibromide (ug/kg)	23 - 199 cm	108	0	0.0						0.062 U	1200 U	36	0.09 U	63 U
Ethylene dibromide (ug/kg)	200 - 399 cm	142	0	0.0						0.059 U	5100 U	81	0.075 U	34 U
Ethylene dibromide (ug/kg)	400 - 574 cm	20	0	0.0						0.067 U	0.092 U	0.078	0.077 U	0.088 U
Xylene (ug/kg)	23 - 199 cm	108	35	32.4	0.11 JT	49000 T	3300	18.8 T	3100 JT	0.11 JT	49000 T	1100	0.24 UT	35000 T
Xylene (ug/kg)	200 - 399 cm	142	42	29.6	0.13 JT	280000 T	16000	1.88 JT	433 JT	0.13 JT	280000 T	4600	0.21 UT	78000 T
Xylene (ug/kg)	400 - 574 cm	20	3	15.0	1.8 T	27400 T	9100	2.2 T	2.2 T	0.17 UT	27400 T	1400	0.22 UT	27400 T
Petroleum														
Diesel Range Hydrocarbons (mg/kg)	23 - 199 cm	171	156	91.2	13 J	38000 J	1700	290 J	5200 J	11 U	38000 J	1600	270 J	5000 J
Diesel Range Hydrocarbons (mg/kg)	200 - 399 cm	161	133	82.6	9.9 JT	190000 J	4400	440 J	5400 J	9.4 U	190000 J	3600	280 J	4900 J
Diesel Range Hydrocarbons (mg/kg)	400 - 574 cm	16	13	81.3	89 J	4500 J	1200	640 J	4500 J	12 UT	4500 J	980	460 J	4500 J
Gasoline Range Hydrocarbons (mg/kg)	23 - 199 cm	174	62	35.6	9.8 J	5100 J	330	31 J	2200 J	1.2 U	5100 J	120	4.5 U	260 J
Gasoline Range Hydrocarbons (mg/kg)	200 - 399 cm	220	66	30.0	1.5 T	21000 J	890	32 J	5300 J	1.2 U	21000 J	270	3.8 U	95 J
Gasoline Range Hydrocarbons (mg/kg)	400 - 574 cm	34	11	32.4	11 J	1400 J	160	32 J	1400 J	1.3 U	1400 J	54	1.6 U	120 J
Residual Range Organics (mg/kg)	23 - 199 cm	171	152	88.9	9.25 JT	25000 J	1600	700 J	5500 J	7 U	25000 J	1400	620 J	5100 J
Residual Range Organics (mg/kg)	200 - 399 cm	161	135	83.9	9.6 JT	110000 J	2900	790 J	4900 J	7.1 U	110000 J	2400	580 J	4000 J
Residual Range Organics (mg/kg)	400 - 574 cm	16	14	87.5	13.5 JT	3100 J	1200	980 J	3100 J	8.4 UT	3100 J	1100	880 J	3100 J
Total Petroleum Hydrocarbons (mg/kg)	23 - 199 cm	171	160	93.6	9.25 JT	63100 JT	3300	990 JT	10500 JT	3.2 UT	63100 JT	3100	914 JT	10500 JT
Total Petroleum Hydrocarbons (mg/kg)	200 - 399 cm	161	142	88.2	9.6 JT	321000 JT	7200	1130 JT	9020 JT	7.1 UT	321000 JT	6400	820 JT	9230 JT
Total Petroleum Hydrocarbons (mg/kg)	400 - 574 cm	16	14	87.5	13.5 JT	7720 JT	2500	1540 JT	7720 JT	8.4 UT	7720 JT	2200	1480 JT	7720 JT

Notes:
J - The associated numerical value is an estimated quantity.
N - Presumptive evidence of presence of material.
T - The associated numerical value was mathematically derived (e.g., from summing multiple analyte results such as Aroclors, or calculating the average of multiple results for a single analyte). Also indicates all results that are selected for reporting in preference to other available results (e.g., for parameters reported by multiple methods) for the Round 2 data.
U - The material was analyzed for, but was not detected. The associated numerical value is the sample quantitation limit.

LOWER WILLAMETTE GROUP

PORTLAND HARBOR RI/FS
ROUND 2A SEDIMENT SITE CHARACTERIZATION SUMMARY REPORT

DRAFT

DO NOT QUOTE OR CITE
This document is currently under review by US EPA and its federal, state, and tribal partners and is subject to change in whole or in part.

July 15, 2005

Prepared for
Lower Willamette Group

Prepared by
Integral Consulting Inc.

IC05-0025

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MAP FOLIO

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LIST OF ACRONYMS

CAS	Columbia Analytical Services
GC/ECD	gas chromatography/electron capture detection
CLP	Contract Laboratory Program
COI	chemicals of interest
CRD	Columbia River datum
CSM	conceptual site model
DDD	dichlorodiphenyldichloroethane
DDE	dichlorodiphenyldichloroethylene
DDT	dichlorodiphenyltrichloroethane
DGPS	differential geographical positioning system
EDD	electronic data deliverable
EPA	U.S. Environmental Protection Agency
EPC	exposure point concentration
ERA	ecological risk assessment
FID/PID	flame ionization detector /photo-ionization detector
FOD	frequency of detection
FSP	field sampling plan
GC	gas chromatograph
GC/MS	gas chromatograph/mass spectrometer
HHRA	human health risk assessment
HPAH	high molecular weight polycyclic aromatic hydrocarbons
ICP-MS	inductively coupled plasma-mass spectrometry
ICP-OES	inductively coupled plasma-optical emission
ISA	initial study area
LCS/LCSD	laboratory control sample/laboratory control sample duplicate
LDC	Laboratory Data Consultants, Inc.
LPAH	low molecular weight polycyclic aromatic hydrocarbons
LWG	Lower Willamette Group
MCPA	(4-chloro-2-methylphenoxy)acetic acid
MCPP	2-(2-methyl-4-chlorophenoxy)propionic acid
MS/MSD	matrix spike/matrix spike duplicate
N&E	nature and extent
NEA	Northeast Analytical
NOAA	National Oceanographic and Atmospheric Administration
PAH	polycyclic aromatic hydrocarbons
PCB	polychlorinated biphenyls
PCDD/FS	polychlorinated dibenzo-p-dioxins and furans
QA	quality assurance
QAPP	quality assurance project plans
QC	quality control
RDL	reported detection limits

RI/FS	remedial investigation and feasibility study
RM	river mile
SCRA	site characterization and risk assessment
SIM	selective ion monitoring
SOP	standard operating procedure
SVOC	semivolatile organic compound
TCE	trichloroethene
TEF	toxicity equivalence factor
TEQ	toxicity equivalent
TOC	total organic carbon
TPH	total petroleum hydrocarbon
VOC	volatile organic compound

1.0 INTRODUCTION

This Round 2A Sediment Site Characterization Summary Report presents the results of sediment sampling performed by the Lower Willamette Group (LWG) for the Portland Harbor remedial investigation and feasibility study (RI/FS) during the summer and fall of 2004 (hereafter referred to as Round 2A). The *Round 2 Surface and Beach Sediment Field Sampling Report* and the *Round 2A Subsurface Sediment Field Sampling Report*, detailing the sediment sample collection and handling procedures, were submitted to the U.S. Environmental Protection Agency (EPA) on January 4 and January 10, respectively (Integral 2005; Integral and Anchor 2005).

The required content of this site characterization summary report is specified in the EPA-approved Portland Harbor RI/FS Programmatic Work Plan (Work Plan) (Table 6-1; Integral et al. 2004c), where the purpose of the report is described as

> Provides validated sample analysis results in tabular format. Provides chemical concentration maps showing the distribution of sample analysis results for selected [chemicals of interest] COIs. Data validation reports and a summary of data validation results also will be included in each site characterization summary report. [Exposure point concentrations] EPCs for human health will be submitted as interim deliverables with site characterization summary reports.[1]

This Round 2A Sediment Site Characterization Summary Report summarizes the data collection activities and describes the laboratory analyses, data validation, and data management procedures used to generate the Round 2A chemical and physical sediment characterization data. All Round 2A sediment data are summarized in tables, and selected COI results are geographically depicted on maps. This report consists of four sections and four appendices. The remaining sections of this report include the following information:

- **Section 2: Data Collection Activities.** Section 2 summarizes the objectives and methodologies used in the beach, surface, and subsurface sediment sample collection. Detailed sample acquisition information is provided in the field sampling reports (Integral 2005; Integral and Anchor 2005). Section 2 also notes deviations from the approved Round 2 field sampling plans that occurred during Round 2A.
- **Section 3: Sample Analyses and Data Management.** Section 3 provides a detailed account of the sample processing and laboratory analyses, highlighting deviations from the Round 2 Quality Assurance Project Plan (QAPP). The chemical data validation and database management processes are detailed,

[1] EPCs for human health will be submitted as an interim deliverable 90 days after EPA approval of the Exposure Point Concentration Approach and Summary of Exposure Factors Interim Deliverable.

including the development of the Round 2 site characterization and risk assessment (SCRA) database from the full Round 2 database.

- **Section 4: Round 2A Results.** Section 4 presents the Round 2A sediment chemistry and physical characterization results.
- **Section 5: References.** Citations noted in the text are provided in Section 5.
- **Appendices.** Appendix A contains the complete set of final subsurface core logs from Round 2 cores, both in hardcopy and electronic format. Appendix B presents a summary of the chemical data quality review and validation process. Appendix C contains the full SCRA database (on CD). Appendix D presents cross-tab tables of beach, surface, and subsurface SCRA data for the subset of chemicals that are mapped in this report.

This report does not contain the results of the benthic toxicity testing or the sedimentation core sampling, which are presented under separate cover (Windward 2005; Anchor 2005). The results of other Round 2 sampling events (e.g., surface water, groundwater) will be presented in subsequent site characterization summary reports as those data become available.

2.0 DATA COLLECTION ACTIVITIES

This section provides summaries of the Round 2A sediment data collection activities and deviations from the approved sampling plans.

2.1 SEDIMENT SAMPLE COLLECTION

The purpose of Round 2A sampling was to collect sediment data for the RI and risk assessments and initiate data collection for the FS. The specific objective of the Round 2 sediment sampling program was to collect the following types of data:

- Beach sediment chemistry to support the human health risk assessment (HHRA)
- Shoreline and riverbed surface sediment chemistry to characterize chemical distributions in surface sediments and potential source effects to the river, and to support the ecological risk assessment (ERA) and HHRA
- Subsurface sediment chemistry and physical data to characterize chemical distributions in subsurface sediments and potential source effects to the river, to support the FS and groundwater impacts assessment tasks, and to confirm the physical conceptual site model (CSM)
- Preliminary sedimentation samples (e.g., radioisotope cores) in areas that may have depositional processes to support the FS.

The following sections briefly describe sampling methods used for the collection of the various sediment types. Detailed descriptions of the data collection methods associated with each type of data were included in the sediment field sampling reports (Integral 2005; Integral and Anchor 2005).

Map 2-1a – i provide an overview of all station locations and sample types associated with the Round 2A sediment sampling fieldwork.

2.1.1 Shorebird Foraging Areas and Human Use Beach Sediment Sampling

Composite shoreline sediment samples were collected from July 26-30, and on November 5, 2004 at 21 shorebird foraging areas from river mile (RM) 2 to 10, and 4 collocated shorebird foraging areas and potential human use beaches between RM 2 and 3. The 25 Round 2A shoreline samples are indicated by a "B" in the station identification code on Map 2-1a – i (e.g., B001). The 4 collocated shorebird and human beach area locations stations are B001, B002, B003, and B005 on Map 2-1a. For presentation purposes, Map 2-1a – i depicts the shoreline samples as a point only. The Surface and Beach Field Sampling Report (Integral 2005) provides a map that more accurately displays the actual shoreline area sampled. As described below, all of the Round 2A shoreline samples were collected close to waterline; these samples are generally referred to as "beach" samples in this data report.

Shorebird foraging and human use shoreline areas up to 500 m in length were selected for sampling. Each beach was divided into 100-m segments, and, based on the width of the beach, a transect was placed at either the +4 or +5 ft Columbia River Datum (CRD) level. The transect elevation was calculated from the waterline at the beach based on real-time river levels read from the river level gage on the Morrison Bridge in downtown Portland. The transect was located on the beach using a graduated staff and level. Once the location of the transect was determined, it was divided into 100-m sections, and each 100-m section was subdivided into three 33-m subsections. A point on the transect was randomly selected within each of the 33-m subsections. The subsample was collected from one of three locations at each point: 1) on the transect line, 2) 0.5 m downslope (toward the water), or 3) 0.5 m upslope of the transect line. The specific location was randomly selected for each point on the transect. If the total sampling location was less than 100 m long, the full distance of the location was measured and divided into three subsections, and one surface sediment subsample was collected randomly within each subsection. All subsamples were composited into one sediment sample for each beach.

At each beach sampling location, sediments were collected to a depth of 15 cm using a stainless-steel, hand-held coring device. The sediment was placed into a stainless-steel bowl, and the physical characteristics were recorded. The composite sample bowl was covered with aluminum foil between discrete subsample locations. This process was repeated until sediment was collected from the three or more discrete sample locations identified for the composite sample.

A total of 28 composite beach sediment samples (including two field replicate samples and one homogenate split sample) were collected and submitted to the analytical laboratories for chemical testing. Similar to the beach composite samples, the replicate beach samples were composed of subsamples and were collected contemporaneously alongside each primary beach subsample. The replicate subsamples were composited and processed separately from the primary sample. At sampling stations where field quality assurance (QA) samples were collected, the primary field sample was assigned the "-1" sample ID suffix (e.g., B025-1), the field replicate sample was assigned the "-2" sample ID suffix (e.g., B025-2), and field homogenate split was assigned the "-3" sample ID suffix (e.g., B025-3).

2.1.2 Surface Riverbed Sediment Sampling

Surface riverbed sediment grab samples (0-30 cm; generally referred to as "surface" samples in this report) were collected in the lower Willamette River from July 19 through November 5, 2004 at a total of 523 target locations distributed from about RM 2 to RM 25. All but eight of these stations (i.e., 515 stations) were locations identified in the sediment field sampling plan (FSP) and were located in Portland Harbor from about RM 2 to RM 11 (Map 2-1a – i). These Round 2A surface sediment stations are indicated by a "G" in the station identification code (e.g., G001; Map 2-1a – i). Six upstream stations (between RM 16 and 25) and two downstream (between RM 2 and 3) stations were added for chemical and toxicity sampling in October 2004 based on discussions between EPA and the LWG. These stations are indicated by a "U" (upstream stations) or a "D" (additional downstream stations) on Map 2-1a – i.

All but five surface sediment samples were collected using the 0.3-m^2 hydraulic power grab sampler deployed from a sampling vessel equipped with a differential geographical positioning system (GPS) navigation system that targeted and recorded the coordinates at each sampling location.. Five stations (G124, G126, G161, G411, and G431) could not be accessed directly by boat due to water depth or in-water obstructions (e.g., pilings). These stations were sampled from the shoreline below the high-water mark using a hand-held GPS unit for positioning. These samples were collected by hand with sampling spoons and mixing bowls. The sampled elevations for these stations ranged from +10 to +5 ft NAVD88 (+5 to 0 ft CRD).

Typically, following retrieval of the power grab sampler, overlying water was siphoned off the top of the grab, and the sample was evaluated for acceptability based on the criteria defined in the FSP. Once an acceptable grab was obtained, subsamples for volatile analytes and sulfides (if required) were collected immediately from the bulk sample. After the sediment in the grab was described, sample volumes for the remaining non-volatile analytes were collected and homogenized using stainless-steel spoons and pots.

Including field replicates and homogenate splits, a total of 576 surface sediment grab samples from 523 stations were submitted to analytical laboratories for chemical testing. Surface sediments from 222 of the 523 stations, including the six upstream stations, were submitted to the bioassay laboratory for toxicity testing. The results of the toxicity testing have been presented under separate cover (Windward 2005) and will not be discussed in this report. Field replicate grabs were collected by targeting the primary grab sample coordinates. The distances between the primary and duplicate sample locations ranged from 3 to 29 ft. At sampling stations where field QA samples were collected, the primary field sample was assigned the "-1" sample ID suffix (e.g., G007-1), the field replicate sample was assigned the "-2" sample ID suffix (e.g., G007-2), and field homogenate split was assigned the "-3" sample ID suffix (e.g., G007-3).

2.1.3 Subsurface Riverbed Sediment Sampling

Subsurface riverbed sediment cores were collected at 200 locations within the lower Willamette River between RM 2 to 10 from September 20 to October 8 and from October 18 to November 11, 2004. Samples from these cores are generally referred to as subsurface samples in this report. Subsurface sediment station locations are indicated by a "C" in the station identification code (e.g., C009) on Map 2-1a – i. Most of these locations were sampled to support chemical distribution in subsurface sediments; however, 49 locations also supported FS purposes, 11 locations were sampled to further support the physical CSM studies and hydrodynamic modeling effort, and 4 locations were sampled to evaluate sedimentation processes.

Subsurface sediment cores were collected over water using a vessel-deployed vibracore. Onboard the sampling vessel, the cores were cut into segments approximately 4 ft long for handling, storage, and transport to the core processing lab. At the processing lab, the cores were typically opened using a table saw. The two halves of the core were then separated using a decontaminated, stainless-steel spatula or wire. After the sediment in each segment of a core was exposed, the subsurface sample intervals were determined based on the core type designation (e.g., N&E, FS, CSM, or sedimentation), following the strategies presented in the coring field sampling plans (FSPs) (Integral et al. 2004a; Anchor and Texas A&M 2004). Samples for short-holding time analytes and flame ionization detector/photo-ionization detector (FID/PID) field screening data were collected immediately. The sediment was then described, photographed, and sampled for the remaining analytes. Core logs, including the field screening values, are provided in Appendix A. Photographs of all cores are included in the Round 2A Subsurface Sediment Field Sampling Report (Integral and Anchor 2005).

A total of 218 subsurface sediment cores were collected from the 200 stations. A total of 717 sediment samples from the cores were submitted for chemical and/or physical analyses, including 30 replicate core samples and 19 homogenate split samples. Unlike field replicate grab samples, the locations of replicate cores were deliberately shifted from the initial sampling location in order to avoid the area disturbed during the collection of the initial core. The distances between the initial and replicate core locations ranged between 1 to 43 feet. At sampling stations where field QA samples were collected, the primary field sample was assigned the "-1" sample ID suffix (e.g., C011-A1), the field replicate sample was assigned the "-2" sample ID suffix (e.g., C011-A2), and field homogenate split was assigned the "-3" sample ID suffix (e.g., C011-A3). The suffix designation "1" (e.g., C207-B1) was omitted from samples at a few stations where split and/or replicate cores were later collected.

Of the total 717 core samples, 60 samples were collected from sedimentation cores and submitted for ^{210}Pb and bulk metals analyses. An additional 72 sedimentation core samples were analyzed exclusively for radioisotopes ^{7}Be and ^{137}Cs. Twelve samples were submitted for conventionals and organics analyses in ancillary cores taken immediately adjacent to the sedimentation core at each station. The results of the sedimentation core analyses are not included here; they have been presented by Anchor under separate cover (Anchor 2005).

2.2 DEVIATIONS FROM APPROVED FIELD SAMPLING PLANS

This section summarizes the deviations from the Round 2 FSPs (Integral et al. 2004a,b) that occurred during the Round 2 field sampling due to necessary modifications to sample station locations, sampling difficulties, or the inability to obtain the proposed samples at target locations and the substitution of alternative locations. These are minor deviations, and they do not impact the overall objectives and goals of the sampling program. Also, the changes to the surface and subsurface sampling stations were discussed during weekly teleconferences between LWG field staff and EPA and its team members. This weekly call provided a forum for the discussion and resolution of sampling issues that arose while the sampling program was in progress.

Section 3.1 of this report details changes made to the approved QAPP and standard operating procedures (SOPs) during sample processing and chemical analyses of sediment samples.

2.2.1 Station Location Deviations

2.2.1.1. Beach Sampling Locations

Based on the findings of a field reconnaissance conducted on June 29, 2004, modifications were made to the beach sampling approach and the areas proposed for sampling in the Shorebird Area and Beach Sediment Sampling FSP (Integral et al. 2004b). Two of the proposed shoreline locations were dropped because there was no or very little suitable beach habitat present, and the target elevation for all the beach sampling was altered from +7 ft to +5 ft CRD. EPA and LWG agreed to these modifications, which were documented in a July 16, 2004 memorandum from Windward to EPA prior to the sampling event. This memorandum was presented as Appendix A in the *Round 2 Surface and Beach Sediment Field Sampling Report* (Integral 2005).

2.2.1.2. Surface Sampling Locations

Changes were made to 44 surface sediment station locations during Round 2A field activities. Thirty-four surface stations were moved more than approximately 50 feet away from their target location generally due to obstructions or water depth limitations, six stations were dropped from the sampling program primarily because the target location was onshore, and two stations were added due to navigational errors. Table 2-1 lists the changes that were made to the surface sediment sampling locations during Round 2A sampling and the rationale for each modification; additional details are provided in Integral (2005).

2.2.1.3. Subsurface Sampling Locations

During the implementation of the Round 2A sampling program, the actual surface grab sampling locations (i.e., the x, y coordinates recorded during the grab sample acquisition) were used as the target coordinates for the subsequent subsurface sampling at that station (Integral and Anchor 2005). There were three exceptions to this rule: 1) at certain locations, field conditions (e.g., overwater structures) and/or water depth requirements for the safe operation of the coring equipment prevented to coring vessel from occupying the sampled surface location; 2), at two stations (C093 and C420) where schedule constraints regarding on-water dredging operations made it necessary to collect subsurface cores prior to the surface grab sample collection, and 3) at sedimentation core locations, where no surface grab samples were collected. In the latter two cases, the proposed station coordinates listed in the Sediment Sampling and Benthic Toxicity Testing FSP were used as the target core sampling locations (Integral et al. 2004a).

During the sampling effort, changes were made to 40 of the planned subsurface sampling locations. Core samples were collected more than approximately 50 feet from their planned target location at 31 stations (Integral and Anchor 2005) to correspond to changes in the surface samples discussed above. Four other subsurface stations were dropped because the target sampling location was onshore, and five core stations were added, including two that were initially proposed to be collected during the Round 2B sampling event (currently scheduled for the late summer/fall 2005; Integral and Anchor 2005). Table 2-2 lists the changes that were made to the subsurface sampling locations during Round 2A sampling and the rationale for each modification.

2.2.2 Subsurface Core Length Deviations

In addition to station location changes, at five locations, the targeted sample length of subsurface cores was changed. These changes were discussed with EPA during the field effort, are described in Integral and Anchor (2005), and are summarized in the table below.

Station	Proposed Length	Change
C019	20	Inadvertently sampled initially as 14-ft core on 9/23/04 (C019); a supplemental 20-ft core was collected on 11/01/04 (C019-2).
C025	20	Inadvertently sampled initially as 14-ft core on 9/23/04 (C025); a supplemental 20-ft core was collected on 11/01/04 (C025-2).
C210	14	Originally planned as a 14-ft core, sampled as 20-ft core in exchange for C213.
C213	20	Originally planned as a 20-ft core, inadvertently sampled as 14-ft core.
C477	14	Changed from 14 ft to 20 ft per LWG request.

3.0 SAMPLE ANALYSES AND DATA MANAGEMENT

This section describes the sample processing and laboratory methods used to analyze the sediment samples. Any deviations from the analytical methods detailed in the QAPP are described below. The data management subsection details how the data validation process occurred from the laboratory data package receipt to a final validated electronic data deliverable (EDD). Furthermore, it describes how the SCRA database was compiled into a series of compatible Excel tables, which were then distributed to the SCRA data users. The EcoChem (Seattle, WA) data validation reports are provided as an attachment to Appendix B.

3.1 SEDIMENT SAMPLE PROCESSING AND ANALYSIS

This section provides an overview of the laboratory sample processing and analytical procedures used during Round 2A. Each subsection notes any deviations from the proposed Round 2 SOPs (Integral et al. 2004a,b) and Round 2 QAPP (Integral and Windward 2004).

3.1.1 Sample Processing and Deviations

A detailed description of sediment sample handling and processing between the field collection and the analytical laboratory, including any deviations from the QAPP and FSPs, is included in the Round 2 sediment field sampling reports (Integral 2005; Integral and Anchor 2005). A brief summary is provided here. These are minor deviations and do not impact the overall objectives and goals of the sampling program.

Following collection, beach composite sample jars were placed inside sealed plastic bags and stored in coolers with ice. At the end of each day, the sample coolers were transported to the field lab where the jars were individually wrapped in bubble wrap, sealed in plastic bags, and either stored in refrigerators at the field lab or shipped to the analytical laboratories. The samples were generally shipped on ice within 48 hours of collection.

Similarly, surface grab sample jars were bagged individually and stored on the grab sampling support vessel in coolers on ice until the end of the sampling day. At the end of each day, all sample coolers were transported to the field lab where the samples were placed in refrigerators. Approximately twice each week, samples were packed in coolers on ice and shipped to the analytical laboratories for analysis.

Subsurface sediment samples were collected from cores at the field lab. Sample jars for analysis were bagged individually and transferred directly to refrigerators to await shipment to the analytical labs. Archival samples from subsurface intervals not selected for analysis were bagged individually and transferred to field lab freezers for storage.

The surface and beach sediment sample processing effort followed the sampling procedures described in the surface sediment and beach FSPs. Minor changes or deviations from the subsurface sampling procedures outlined in the FSP occurred in the field and are discussed in the field sampling report (Integral 2005).

3.1.2 Chemical Analyses and Deviations

Beach, surface, and subsurface sediment samples were collected and analyzed for organic, inorganic, and physical/conventional parameters according to the laboratory methods indicated in Table 3-1. The sediment samples were analyzed by the following laboratories:

- Severn Trent Laboratories (STL – Tacoma, Washington) completed analyses for herbicides
- Northeast Analytical (NEA – Schenectady, New York) completed analyses for pesticides and PCB Aroclors
- Alta Analytical (Alta – El Dorado Hills, California) completed analyses for PCB congeners
- Columbia Analytical Services (CAS – Kelso, Washington; Redding, California; and Houston, Texas) completed the remaining analyses.

All samples were analyzed for metals, semivolatile organic compounds (SVOCs), total organic carbon, grain size, and total solids. Selected samples were additionally analyzed for organochlorine pesticides, chlorinated herbicides, PCB Aroclors, polychlorinated dibenzo-p-dioxins and furans (PCDD/Fs), butyltins, volatile organic compounds (VOCs), and total petroleum hydrocarbons (TPH) as identified in the FSPs (Integral et al. 2004a,b). Shorebird foraging human use beach area samples were also analyzed for coplanar dioxin-like polychlorinated biphenyl (PCB) congeners. Additional archived sediment samples for PCB congener analysis are currently being identified by the LWG and EPA. Samples from sedimentation cores were submitted for chemical and radioisotope analyses. The results of these samples will be presented by Anchor under separate cover and are not discussed in this report.

A summary of sampling locations and the chemical analyses conducted for each Round 2A sample is included in Tables 3-2, 3-3, and 3-4. The following deviations or changes from the target analyte lists included in the FSPs are noted in these tables and include:

- Beach sample B050 was not submitted for dioxin/furan analysis.
- Surface sample G060 was not submitted for VOC analysis.
- Surface samples G302 and G474 were not submitted for dioxin/furan analysis.
- Surface sample G197-2 was not analyzed for specific gravity.
- Dioxin/furan analysis was added to surface sample G374.
- Tributyltin (TBT) analysis was added to surface samples G098, 102, and 359.
- PCB Aroclors analysis was added to surface sample G061.

- Total diesel-range petroleum hydrocarbon (TPH-D) analysis was added to surface sample G066.
- Sulfide analysis was added to surface samples G098, G102, and G112.
- Ammonia analysis was added to surface samples G112, -G196, -G302, -G330, -G354, -G357, -G365, -G369, and -G374
- Subsurface samples C066-D, -C066-E, -C121-C, -C397-C and -C397-D were not submitted for grain-size analysis.
- Subsurface samples C066-D, -C066-E, -C397-C and -C397-D were not submitted for specific gravity analysis.
- Subsurface sample 093-D was not submitted for VOC analysis; total gas-range petroleum hydrocarbon (TPH-G) analysis was added to this sample in the field.
- Core sample C144-E (bottom segment) was not submitted for TPH-G analysis.
- Core sample C270-D (bottom segment) was not submitted for TPH-G or VOC analyses.
- Subsurface samples C417-B and C417-D were not submitted for TBT analysis.
- TPH-G analysis was added to sample 355-B.

Given the very large number of sample analyses conducted in Round 2A, these are relatively minor omissions and do not impact the overall objectives and goals of the sampling program. In addition, the LWG is currently addressing those missed analyses that can be rectified (e.g., using archived sample aliquots to generate the data).

3.1.3 QAPP Deviations

In general, sample analyses were conducted according to the sample preparation and analytical procedures described in the Round 2 QAPP (Integral and Windward 2004), the corrective action plans for SVOC analyses (Integral 2004c,d), and the QAPP addendum for PCB congener analysis (Integral 2004a).

Deviations from the Round 2 QAPP (Integral and Windward 2004) for the analyses of metals, conventional parameters (i.e., grain size), and SVOCs are summarized below. Additional information regarding laboratory procedures used for the sediment samples is provided for VOCs and PCB congeners. There were no deviations from the analytical methods described in the QAPP for these methods or for the analyses of TPH, herbicides, pesticides, PCB Aroclors, butyltins, or dioxins and furans.

3.1.3.1 Metals

The Round 2 QAPP states that metals analyses would be completed by inductively coupled plasma-mass spectrometry (ICP/MS) (EPA Method 6020) for all metals except mercury and, if undetected by ICP/MS, arsenic and selenium. However, as stated in the laboratory case narratives, aluminum, chromium, copper, nickel, and zinc were analyzed by EPA Method 6010B rather than EPA Method 6020. The elevated aluminum concentrations found in the samples were not appropriate for analysis by ICP/MS and were therefore reported by inductively coupled plasma – optical emission spectroscopy (ICP-OES) (EPA Method 6010B). Copper, nickel, and zinc required multiple dilutions for analysis by ICP-MS due to matrix interferences. Since the concentrations of these analytes were sufficiently high, they were reported from the inductively coupled plasma-optical emission (ICP-OES) analysis for all samples.

Two options for analysis of arsenic and selenium were provided in the Round 2 QAPP, depending on their concentrations in the samples. Arsenic was detected and consequently reported by EPA Method 6020 (ICP/MS) for all of the samples. Selenium was analyzed by EPA Method 7742 due to isobaric interference on both the primary selenium isotope (^{82}Se) and the secondary isotope (^{77}Se) when EPA Method 6020 (ICP/MS) was used.

3.1.3.2 Conventional Parameters

The series of grain-size intervals for clay-size fractions indicated in the Round 2 QAPP included phi sizes 8-9, 9-10, and >10 (Table A6-2 of Integral and Windward 2004). This series was consistent with data provided for Round 1. However, the intervals specified in the laboratory contract for the Round 2 analyses and subsequently reported by the laboratory did not include the smallest two intervals; the smallest interval reported was phi >8. The reported intervals are consistent with the specifications provided in the Round 1 QAPP (SEA 2002) and are sufficient for site characterization and risk assessment. No further action has been taken.

There were no other deviations from the analytical methods listed in the QAPP for laboratory analyses conducted for conventional parameters.

3.1.3.3 Semivolatile Organic Compounds

According to the QAPP, SVOC analyses were to be completed by NEA using gas chromatography (GC) and full scan mass spectrometry (MS) with ion trap. However, high levels of interferences were noted in the samples. Therefore, the SVOC analyses were completed by CAS instead of NEA using a series of three analyses that circumvented some of the interferences, thus improving the quality and usability of the results, and allowing the laboratory to complete analyses in a time-efficient manner overall. These procedures are described in detail in Integral (2004a) and included the following components:

1) Prescreening the samples to determine the approximate levels of analytes and matrix interferences
2) Analysis of SVOCs by full scan GC/MS at an appropriate dilution, as determined by the screening
3) Analysis of PAHs by GC/MS with selected ion monitoring (SIM)
4) Analysis of tri-, tetra-, and pentachlorophenols by GC/electron capture detector (ECD).

These procedures were described in the SVOC corrective action plans for sediment cores and surface sediment (Integral 2004c,d). This approach was approved by EPA and successfully implemented by CAS.

3.1.3.4 Volatile Organic Compounds

There were no deviations from the analytical methods included in the QAPP for the laboratory analysis for VOCs in sediment. Samples containing relatively high concentrations of VOCs were analyzed as medium-level samples rather than low-level samples. Low-level samples are analyzed directly by purge-and-trap, whereas medium-level samples are first extracted with methanol to allow dilution of the samples for analysis of the higher levels of VOCs. The reported detection limits (RDLs) of medium-level samples reflect this procedure and are higher than RDLs for the low-level samples. In addition, an error in the analyte list in the Round 2 QAPP was corrected. The analyte bromoethane should have been 1,2-dibromoethane (ethylene dibromide). The laboratory modified their analyte list accordingly.

3.1.3.5 PCB Congeners

PCB congener analyses have currently been conducted only for beach sediments. There were no deviations from the analytical methods included in the QAPP addendum (Integral 2004c) for these analyses. Although provisions were made for analysis of up to 50 g of sample to decrease detection limits (EPA 2005, pers. comm.), PCB levels in the beach samples were sufficiently high that the method-specified sample mass of 10 g of sample could be used in all cases.

3.2 DATA VALIDATION

As required by the Round 2 QAPP (Integral and Windward 2004), approximately 10% of the sediment data were fully validated, and the remaining data were subjected to Level 3 data validation, which includes the evaluation and assessment of the sample results and applicable quality control results reported by the laboratory. The data validation subcontractor for the Round 2 sediment data was EcoChem, Inc., located in Seattle, WA. The first data package for each analytical method was additionally submitted to EPA for data validation by EPA's QA Office.

The inorganic, organic, PCB congener, and PCDD/F data were validated in accordance with guidance specified by the U.S. EPA Contract Laboratory Program (CLP) National Functional Guidelines for Inorganic and Organic Data Review, by EPA Region 10 SOPs for validation of PCB congener data and PCDD/F data (EPA 1994, 1995, 1996, 1999), and by *Guidance on Environmental Data Verification and Validation* (EPA 2002). Modifications were made to the Functional Guidelines to accommodate quality assurance/quality control (QA/QC) requirements of the non- CLP methods that were used for this project. Data qualifiers were assigned during data validation if applicable control limits were not met, in accordance with the EPA data validation guidelines and the quality control requirements included in the referenced methods. The data validation qualifiers and definitions are summarized in Table 3-5.

The following laboratory deliverables were reviewed during Level 3 and full data validation:

- The case narrative discussing analytical problems (if any) and procedures
- Chain-of-custody documentation and laboratory sample receipt logs
- Instrument calibration results
- Method blank results
- Results for laboratory quality control samples required by the referenced method, including laboratory control sample/laboratory control sample duplicate (LCS/LCSD) analyses, matrix spike/matrix spike duplicate (MS/MSD) analyses, surrogate recoveries, and other method specific quality control samples (e.g., serial dilutions for ICP analyses)
- Results for field quality control samples (i.e., equipment blanks, field duplicates, and field split samples)
- Analytical results for the sediment samples.

In addition, all chromatograms were reviewed for PCBs to verify the identity of the reported Aroclors, and for pesticides to evaluate any effects of interference by PCBs and other sample constituents. Chromatograms were reviewed for Level 3 and full validation.

For data packages subjected to full validation, in addition to review and assessment of the documentation identified above, the validation included verification of reported concentrations for the field and QC samples, verification of intermediate transcriptions, and review of instrument data such as mass spectra to verify analyte identification procedures.

After completing the data validation activities for each sediment sample type, a data quality report and a tabular summary of qualified data were generated by EcoChem. The EcoChem data quality reports are included in Attachment 1 of Appendix B. EcoChem chemists added data validation qualifiers assigned during validation to the laboratory report forms and to the laboratory EDDs. The revised EDDs and the hard-copy data validation reports were submitted as the project deliverable. The revised EDDs were then incorporated into the project database, as described in Section 3.4 below.

3.3 DATA QUALITY

Selected data not meeting the data quality criteria were qualified as undetected, estimated, tentatively identified, or rejected during validation, in accordance with the QAPP. A summary of the qualified data by parameter group, including the reasons for qualification, is included in Table 3-6. Additional detail is provided in Appendix B. Data qualified as undetected are usable for all intended purposes. Data qualified as estimated or tentatively identified are usable for all intended purposes, with the knowledge that these data may be less precise or less accurate than unqualified data.

Rejected data are not usable for any purpose. The numbers of rejected data points per analyte group are listed in Table C-2 in Appendix B. Overall, the data quality was good and meets program objectives and goals for the RI/FS.

3.4 DATA MANAGEMENT

The laboratories exported sample, test, batch, and result information into comma-delimited text files with data columns arranged in an order that was recognized by EQuIS. These Electronic Data Deliverables (EDDs) were emailed to Integral where they were checked for proper EQuIS structure and appended with specific information that was unknown or hidden from the labs, such as sampling location, composite information, and field replicate and split information. If any problems were found in the structure of the EDDs, then the laboratory was notified and asked to correct the problem and resubmit the EDD. Each email EDD transmission, with the original, unaltered EDD attachment, was stored to document and track the laboratories' delivery of electronic data to Integral.

When the EDD structure checked out satisfactorily and the appended information was completed, the EDDs were checked electronically by loading them into the temporary section of Integral's LWG project database. In the process of loading, EQuIS checked the EDDs for correct lookup codes (such as for analytes, test methods, and sample matrices), proper relationships for results, tests, batches, and samples (to ensure all results match with a test, tests with samples, and sample/test pairs with batches), and that all derived samples (such as replicates, splits, and matrix spikes) had corresponding parent samples. In addition to these checks, EQuIS also checked "less important" characteristics such as date and time formats and text field lengths to ensure consistency throughout the database. Any error prevented the EDD from loading until the error was corrected. If errors were found that related to the way the lab was reporting the data or constructing the EDD, then the laboratory was notified and asked to correct the problem and resubmit the EDD. If errors were related to Excel automatically formatting date and time fields, for example, then the error was corrected and steps taken to avoid repeats of the problem (such as changing default settings in the software). Each successfully loaded EDD was saved to document and track the data that were loaded into Integral's LWG project database.

In the temporary section of the project database, the newly loaded data were flagged as unvalidated and merged into the permanent section of the project database where they could be queried and examined. As EcoChem completed their validation, the validated data, which included the validator qualifiers, reason codes, and final qualifiers, were loaded into the temporary section of the project database. An update merge was used to apply the validation to the data in the permanent section of the project database and at the same time change the unvalidated flags to validated flags.

Several queries were set up in the permanent database to translate the data structure to a form compatible with National Oceanographic and Atmospheric Administration's (NOAA) Query Manager. The data translation included creating station and sample identifiers, converting the sample type code, and changing the date format. The translated data were imported into an Access file that was provided by NOAA and contained template tables for the Query Manager structure. These tables included one for stations, sediment samples, and sediment chemistry. Tables with definitions of qualifiers and analytical method abbreviations were also imported.

Integral's LWG project database contains all of the data reported by the analytical laboratories. This includes field and lab replicates, lab dilutions, results for the same analyte from multiple analytical methods (SW8270 and SW8270-SIM, for example), and laboratory QA samples such as matrix spikes, surrogates, and method blanks. The data handling rules described in *Guidelines for Data Averaging and Treatment of Non-detected Values for the Round 1 Database* (Integral 2004b, Appendix A) were used to create a data set for the SCRA data users that was simpler: the data set contained only one result per analyte per sample and excluded all of the laboratory QA results. This involved creating a SCRA database that excluded lab QA results, contained only the most appropriate dilution result and analytical method for each analyte, and contained the average of replicates. Excluding the lab QA results was a simple database querying step. Selection of the most appropriate dilution was either done by the reporting laboratory or by the data validator. Selection of the most appropriate analytical method was described in the guidelines document and was accomplished by flagging the appropriate method in the project database. The guidelines document described the rules used for averaging data and carrying qualifiers. Because it was the most data manipulation intensive procedure, the data were divided into subgroups and approximately 40% of each subgroup was verified. If any problems were found with the averaging, then the 100% of the subgroup was verified and problems were corrected. The preliminary SCRA database was compiled into a series of database-compatible Excel tables and distributed to the SCRA data users over the period between April 7 and May 17, 2005.

4.0 ROUND 2A RESULTS

Round 2A results for the sediment chemistry and physical analyses are presented in this section. As noted in Section 1, this data report is a straightforward presentation of the sediment data collected during Round 2A. Review and evaluation of these data in conjunction with other data types (e.g., surface water), evaluation of spatial trends in the distribution of contaminants in sediments, source evaluation, and preliminary risk analyses will be presented in the Comprehensive Round 2 Site Characterization Summary and Data Gaps Analysis Report.

The complete Round 2A sediment data set containing all results is provided as an Excel cross-tab table in Appendix C. Summary statistics for all analytical results in the Round 2A beach, riverbed surface, and subsurface sediment samples are compiled in Tables 4-1, 4-2, and 4-3, respectively. The summary statistics tabulated include the frequency of detection (FOD), and the minimum, maximum, mean, median, and 95th percentile values for both detected only and both detected and undetected values combined, on analyte-by-analyte basis. The results of the 13 core samples analyzed from the 0-30 cm interval (the "A" core interval which was typically archived) have been grouped with the surface sediment grab sample analytical results in Table 4-2.

Map 4-1a – i shows the distribution of percent fines (combined silts and clays) in the beach, surface, and subsurface sediment samples as determined through laboratory grain-size analysis, and Table 4-4 lists the grain-size data (coarse silts through clays) used to calculate the percent fines for each sample. Map 4-2a – i shows the total organic carbon (TOC) content in each sample. Maps 4-3a – i through 4-29a – i show the mapped distribution, on a chemical-by-chemical basis, of selected Round 2A sediment chemical data. A map key at the front of the map folio explains the mapped data format. Note that due to display size constraints, the chemical concentration data and sampled depth data are not displayed at the exact station location; however, the actual station locations are indicated on the maps for cross-referencing. Beach, surface, and subsurface data and core segments that were archived (e.g., most "A" segments are indicated) on the maps. The core segment divisions displayed on the maps are scaled to the thickness of each core segment analyzed. To illustrate the overall range of measured concentrations, graphs showing the frequency distributions of the sediment data for each mapped analyte are presented in Figures 4-1 through 4-29 for both beach and surface data combined and the subsurface data.

The mapped compounds were selected to represent the major chemicals or chemical groups detected in the Round 2A data. Most are chemicals detected at among the highest frequencies for their analyte groups and/or they exhibited among the highest maximum or mean concentrations. Many overlap with the indicator chemicals determined from historical samples (i.e., those mapped in the Work Plan), as well as the Round 1 data (those mapped in the Round 1 Site Summary Report). All chemicals selected for mapping had a FOD of at least 10% in samples analyzed. The chemicals selected for map presentation in this report due to relatively high FOD in their analyte groups in surface and subsurface samples (Tables 4-2 and 4-3) that were not mapped in the Work Plan or Round 1 Site Summary report include the individual PCB Aroclors 1248, 1254, and 1260; total chlordanes; hexachlorobenzene; benzene; TPH; and chromium. The complete data set used to generate the maps is provided as Excel cross-tab tables in Appendix D.

The color-coded concentration ranges included on Maps 4-1a – i through 4-39a – i were derived as follows. The fines percentages on Map 4-1a – i are presented in into quartiles. The percent TOC data (Map 4-2a – i) are shown in three intervals: 0.5 to 1%, 1 to 5%, and greater than 5%. The concentration categories (e.g., breaks) used in chemical data on Maps 4-3a – i through 4-29a – i are the same or similar to the ones used in the Work Plan and Round 1 report, which were based on the frequency distributions in the historical data set for these compounds and modified/approved by EPA. Concentration categories for chemicals that were not mapped in previous reports are grouped based on natural breaks observed in the data.

The primary objective of this Round 2A data summary report is to document the horizontal and vertical distribution of chemicals in sediment in the study area. When calculating summed analyte concentration values, such as total PCB Aroclors, TPH, total low molecular weight polycyclic aromatic hydrocarbons (LPAHs), total high molecular weight polycyclic aromatic hydrocarbons (HPAHs), chlordanes, and total p,p'-DDD, -DDE, -DDT, a value of zero was used for non-detects on an individual sample basis. The summed LPAHs include naphthalene, 2-methylnaphthalene, acenaphthylene, acenaphthene, fluorene, phenanthrene, anthracene. Summed HPAHs include fluoranthene, pyrene, benz(a)anthracene, chrysene, benzo(k and b) flouranthenes, benzo(a)pyrene, indeno(1,2,3-cd)pyrene, dibenz(a,h)anthracene, and benzo(g,h,i)perylene. 2,3,7,8-Tetrachlorodibenzo-p-dioxin (2,3,7,8-TCDD) toxicity equivalent (TEQ) values were calculated with World Health Organization 1997 TEFs for mammals, as was done for the Round 1 data (see Appendix C, Integral 2004b). Sample statistics presented in tables and text were calculated using reported detection limit values for non-detects. Tables 4-4 through 4-12 present the constituent concentrations used in each summed analyte group shown on the maps.

4.1 SHOREBIRD FORAGING AREA AND HUMAN USE BEACH SEDIMENT RESULTS

This section describes the physical characteristics and chemical concentrations measured in the 27 beach sediment sample results reported in the SCRA database. The major analyte groups measured in beach or shoreline sediment samples included conventionals (grain size, total solids, TOC), metals, PCBs as Aroclors, PCBs as congeners, organochlorine pesticides, SVOCs, and dioxins and furans. The summary statistics for all analytes measured in the beach sediment samples are shown in Table 4-1. The data for both the shorebird foraging areas and the combined shorebird forage area/human use beach areas are combined in Table 4-1. The summary statistics include the FOD, and the minimum, maximum, mean, median, and 95th percentile values for both detected only and both detected and undetected values combined. A general overview of the summary statistics for detected constituents complied in Table 4-1 is given below. The histograms provided in Figures 4-1 through 4-29 show the data distribution for the mapped indicator chemicals.

The fines content (combined silts and clays) in beach samples ranged from 0.32 to 49.5% (Map 4-1a – i), with a mean value of 12.1% and a median value of 8.1%. TOC content ranged from an estimated (J) 0.04 to 1.97% (both maxima occurred at B026; Map 4-2a – i), with a mean value of 0.48% and a median value of 0.27%.

The 12 metals analyzed in the beach samples were detected in all samples, except for antimony (detected in 15 samples), mercury (detected in 26 samples), and selenium (detected in 7 samples). For the mapped metals, detected concentrations ranged from a minimum of 1.67 to a maximum of 8 milligrams per kilogram (mg/kg) (max at B024) for arsenic (Map 4-3a – i), with a mean value of 3.09 mg/kg and a median value of 2.72 mg/kg. Detected concentrations of cadmium ranged from 0.076 to 4.21 mg/kg (max at B021; Map 4-4a – i), with a mean value of 0.385 mg/kg and a median value of 0.14 mg/kg. Detected concentrations of total chromium ranged from 11 to 83.6 mg/kg (max at B004; Map 4-5a – i), with a mean value of 23.2 mg/kg and a median value of 18.6 mg/kg. Detected concentrations of copper ranged from 8.8 J to 108 mg/kg (max at B018; Map 4-6a – i), with a mean value of 26 mg/kg and a median value of 18.9 J mg/kg. Detected lead concentrations ranged from 4.79 to 242 mg/kg (max at B021; Map 4-7a – i), with a mean value of 29.8 mg/kg and a median value of 15.9 mg/kg. Detected concentrations of mercury ranged from 0.008 J to 0.412 mg/kg (max at B015; Map 4-8a – i), with a mean value of 0.0515 mg/kg and a median value of 0.024 J mg/kg. Detected concentrations of zinc ranged from 52.7 to 1,230 mg/kg (max at B021; Map 4-9a – i), with a mean value of 156 mg/kg and a median value of 78.1 mg/kg.

Three PCB Aroclors (1248, 1254, and 1260) were detected in the beach samples (Maps 4-12a – i, 4-13a – i, and 4-14a – i, respectively). Detected concentrations of total PCBs based on Aroclors (Total PCBs, Map 4-11a – i) ranged from 4.4 to 1,400 micrograms/kilogram (µg/kg) (max at B004), with an overall mean value of 166 µg/kg and a median value of 73 µg/kg. Aroclor 1260, detected in 13 samples, was the most frequently detected Aroclors. Detected concentrations of Aroclor 1260 (Map 4-14a – i) ranged from 4.4 to 240 µg/kg (max at B026), with a mean value of 57.6 µg/kg and a median value of 32 µg/kg. Aroclor 1248 was detected in seven samples, but was present at the highest concentration among the three Aroclors. Detected concentrations of Aroclor 1248 (Map 4-12a – i) ranged from 8.7 to 1,400 µg/kg (max at B004), with a mean value of 243 µg/kg and a median value of 37 µg/kg. Aroclor 1254 (Map 4-13a – i) was detected in only three samples, at concentrations ranging from 54 J to 78 µg/kg (max at B025-1). Thirteen of the 27 beach samples were analyzed for 13 coplanar PCB congeners, and all but two congeners were detected in each of the samples analyzed. PCB congener results were converted to their 2,3,7,8-TCDD TEQ values, which are discussed below.

Twenty-two of the 28 organochlorine pesticide compounds analyzed were detected in the 27 beach samples. The most frequently detected compounds were 4,4'-DDT (26 samples; Map 4-18a – i) and its metabolites, 4,4'-DDD (23 samples; Map 4-16a – i) and 4,4'-DDE (20 samples; Map 4-17a – i), one or more of which were detected in each of the beach samples. Detected concentrations of the summed total of these compounds (Map 4-15a – i) ranged from 0.311 J to 334 J µg/kg (max at B018), with an overall mean value of 22.4 µg/kg and a median value of 2 J µg/kg. Total chlordane constituents were detected in 12 samples. The summed detected concentrations of total chlordane constituents (total chlordanes, Map 4-19a – i) in the beach samples ranged from 0.036 J to 6.33 J µg/kg (max at B024), with a mean value of 1.4 µg/kg and a median value of 0.215 J µg/kg.

Of the SVOCs analyzed, several PAH group compounds were detected in each of the beach samples, and these were present at the highest maximum and mean detected concentrations among all the SVOCs. Total PAH concentrations in samples ranged from 4.92 J to 94,200 µg/kg (max at B016), with a mean value of 4,720 µg/kg and a median value of 183 J µg/kg. Total LPAH (Map 4-26a – i) detected concentrations ranged from 1.62 J to 8,640 µg/kg (max at B016) with mean and median values of 439 µg/kg and 19.6 J µg/kg, respectively. Total HPAH (Map 4-27a – i) detected concentrations ranged from 3.3 J to 85,600 µg/kg (max at B016) with mean and median values of 4,290 µg/kg and 150 J µg/kg, respectively. After PAHs, dibenzofuran (Map 4-22a – i), detected at concentrations ranging from 0.28 J to 76 J µg/kg (max at B016) was the most frequently detected SVOC, with mean and median values of 6.44 µg/kg and 0.82 J µg/kg, respectively. The chemical hexachlorobenzene (Map 4-23a – i) was detected in six beach samples, at concentrations ranging from 0.099 to 2.09 J µg/kg (max at B018), with a mean value of 0.894 µg/kg and a median value of 0.176 J µg/kg. Bis(2-ethylhexyl)phthalate (Map 4-25a – i) was detected in five beach samples, at concentrations ranging from 39 to 2,600 µg/kg (max at B022-1), with a mean value of 652 µg/kg and a median value of 190 µg/kg. Concentrations of 4-methylphenol (Map 4-24a – i) were detected in two beach samples, at concentrations of 4.6 J µg/kg at B010 and 9.5 J µg/kg at B003. Herbicides were not analyzed in beach samples (Table 3-2).

Several dioxin and furan compounds were detected in each of the 26 beach samples for which they were analyzed. Detected total 2,3,7,8-TCDD TEQ values Map 4-29a – i) ranged from 0.0272 J at B001 to 76.8 J picograms per gram (pg/g) at B018 (including coplanar PCB congener TEQs), with a mean value of 7.5 pg/g and a median value of 1.08 J pg/g. The maximum 2,3,7,8-TCDD TEQ value that did not include PCB congener results was 15.5 J pg/g at B009. Table 4-12 lists the individual compound concentrations used to calculate the TEQ value for each beach sample.

4.2 SURFACE RIVERBED SEDIMENT RESULTS

This section describes the physical characteristics and chemical concentrations measured in the 562 riverbed surface sediment grab samples and 13 surface ("A" interval) core samples. The summary statistics for all analytes measured in surface sediment samples are compiled on an analyte-by-analyte basis in Table 4-2. An overview of the surface data for detected constituents is given below. Frequency distributions, showing both detected and undetected values, of surface and beach data combined for each mapped analyte are provided in Figures 4-1 through 4-29

The fines content (combined silts and clays) in surface interval samples ranged from 0.62 to 100% (max at G384-1; Map 4-1a – i), with a mean value of 51.4% and a median value of 57.7%. TOC content ranged from 0.08 to 27% (max at G006; Map 4-2a – i), with a mean value of 1.98% and a median value of 1.94%.

Aluminum, arsenic, copper, lead, silver, and zinc were detected in each of the 562 samples analyzed for metals. Detected arsenic concentrations ranged from 0.97 to 34 mg/kg (max at G445; Map 4-3a – i), with a mean value of 4.16 mg/kg, and a median value of 3.67 J mg/kg. Detected cadmium concentrations ranged from 0.043 J to 5.41 mg/kg (max at G453; Map 4-4a – i), with a mean value of 0.304 mg/kg and a median value of 0.246 mg/kg. Detected concentrations of total chromium ranged from 8.7 to 224 mg/kg (max at G025; Map 4-5a – i), with a mean value of 31.7 mg/kg and a median value of 31.1 mg/kg. Detected concentrations of copper ranged from 9.7 to 1,080 mg/kg (max at G390; Map 4-6a – i), with a mean value of 53.8 mg/kg and a median value of 39.1 mg/kg. Detected concentrations of lead ranged from 2.5 to 1,290 J mg/kg (max at G355; Map 4-7a – i), with a mean value of 28.9 mg/kg and a median value of 14.8 mg/kg. Detected concentrations of mercury ranged from 0.006 J to 2.01 mg/kg (max at G453; Map 4-8a – i), with a mean value of 0.0907 mg/kg and a median value of 0.065 mg/kg. Detected concentrations of zinc ranged from 40.9 to 1,940 mg/kg (max at G111; Map 4-9a – i), with a mean value of 139 mg/kg and a median value of 109 mg/kg.

Butyltins were analyzed in 116 samples, and detected in 52 samples. The dibutyltin ion (116 samples) and tributyltin ion (115 samples) were the most frequently detected forms, and also displayed the highest concentrations. Detected concentrations ranged from 0.14 J to 2,700 µg/kg (max at G421) for dibutyltin, with mean and median values of 69.9 µg/kg and 9 µg/kg, respectively, and from 0.45 J to 46,000 µg/kg (max at G421) for tributyltin (Map 4-10a – i), with mean and median values of 608 µg/kg and 28 µg/kg, respectively.

Six different PCB Aroclors (1221, 1242, 1248, 1254, 1260, and 1268) were detected in the surface samples. Aroclor 1260 (Map 4-14a – i) was the most frequently detected (389 samples), while Aroclor 1248 (Map 4-12a – i) was present at the highest detected concentration. Aroclor 1260 detected concentrations ranged from 1.3 J to 5,070 J µg/kg (max at G453) with a mean value of 67.9 µg/kg and a median value of 12 µg/kg. Aroclor 1248 concentrations ranged from 2.59 J to 22,300 J µg/kg (also at G453), with a mean value of 189 µg/kg, and a median value of 15 J µg/kg. Total detected PCB Aroclor concentrations (Map 4-11a – i) in surface samples ranged from 0.851 J to 27,400 J µg/kg (max at G453), with an overall mean value of 216 µg/kg and a median value of 29 J µg/kg.

Organochlorine pesticide compounds were measured in 508 surface interval samples. With the exception of toxaphene, all 28 measured pesticide compounds were detected in one or more samples. The pesticides 4,4'-DDD (491 samples; Map 4-16a – i) and 4,4'-DDE (483 samples; Map 4-17a – i) were the most frequently detected, occurring in 96.7% and 95.1% of the samples analyzed, respectively, although 4,4'-DDT, tentatively identified, was present at the highest maximum (estimated at 12,000 µg/kg; G360; Map 4-18a – i) and mean concentrations (86.6 µg/kg). The highest median concentration among these three compounds was 2.21 J µg/kg for 4,4'-DDE. Total 4,4'-DDT (sum of 4,4'-DDT, -DDD and -DDE) concentrations were derived for 495 samples (97.4% of samples analyzed; Map 4-15a – i) and ranged from 0.051 J to 15,300 µg/kg (max at G360), with an overall mean value of 123 µg/kg and a median value of 5.4 J µg/kg. Total chlordane constituents were detected in 417 samples. Derived total chlordane detected concentrations (Map 4-19a – i) ranged from 0.042 J to 669 J µg/kg (max at G355), with a mean value of 6.14 µg/kg and a median value of 0.991 J µg/kg.

Herbicides were analyzed in 66 samples. Only four herbicide compounds were detected: MCPP (in one sample); 2,4-DB (in one sample), MCPA (in two samples); and 2,4-D (in seven samples). Concentrations of 2,4-D were the highest detected, ranging from 10.8 to 3,250 J µg/kg (max at G334), with a mean value of 497 µg/kg and a median value of 30.2 µg/kg.

VOCs were analyzed in 147 surface samples. Nineteen of the 49 compounds analyzed for were detected. Methyl ethyl ketone was the most frequently detected (in 39 samples), occurring at concentrations ranging from 2.1 J to 15 J µg/kg (max at G288), and with a mean value of 4.25 µg/kg and a median value of 3.8 J µg/kg. The VOC detected at the highest concentration was ethylbenzene, concentrations of which ranged from 0.11 J µg/kg to 5,700 µg/kg (max at G298), with a mean value of 353 µg/kg and a median value of 0.35 J µg/kg. Concentrations of total xylenes (the sum of o- and m,p-xylenes), a mapped analyte detected in 38 samples (Map 4-21a – i), ranged from an 0.14 J to 270 µg/kg (max at G298), with a mean value of 12.2 µg/kg and a median value of 0.68 J µg/kg . Benzene concentrations (Map 4-20a – i), detected in 23 samples, ranged from 0.074 J to 1,100 µg/kg (max at G298), with a mean value of 83.6 µg/kg and a median value of 0.41 J µg/kg.

SVOCs were analyzed in 562 surface interval samples. PAH compounds were detected in 99.1% (557 samples) of total samples analyzed, and were present at the highest maximum and mean detected concentrations. Total PAH concentrations in samples ranged from 0.91 J to 7,950,000 µg/kg (max at G298), with a mean value of 60,000 µg/kg and a median value of 1,010 µg/kg. Detected concentrations of LPAH compounds (552 samples; Map 4-26a – i) ranged from 0.91 J to 5,130,000 (max at G298) µg/kg, with an overall mean value of 25,800 µg/kg and a median value of 149 J µg/kg. Detected concentrations of HPAH compounds (556 samples; Map 4-27a – i) ranged from 1.7 J to 4,350,000 µg/kg (max at G225), with an overall mean value of 34,500 µg/kg and a median value of 832 µg/kg. Following several PAH compounds, bis(2-ethylhexyl)phthalate, a mapped chemical detected in 314 samples (Map 4-25a – i), was present at some of the highest concentrations. Detected concentrations of bis(2-ethylhexyl)phthalate ranged from 4.2 J to 440,000 J µg/kg (max at G367), with an overall mean value of 1,920 µg/kg and a median value of 100 µg/kg. Dibenzofuran, hexachlorobenzene, and 4-methylphenol were detected in 95.6% (537 samples), 48.6% (273 samples), and 50.3% (282 samples) of samples analyzed, respectively. Detected concentrations of dibenzofuran (Map 4-22a – i) ranged from 0.25 J to 46,000 µg/kg (max at G298), with a mean value of 283 µg/kg and a median value of 4.4 µg/kg. Detected concentrations of hexachlorobenzene (Map 4-23a – i) ranged from 0.025 J to 338 J µg/kg (max at G355), with a mean value of 2.91 µg/kg and a median value of 0.784 J µg/kg. Detected concentrations of 4-methylphenol (Map 4-24a – i) ranged from 4 J to 2,500 µg/kg (max at G418), with a mean value of 77.9 ug/kg and a median value of 16 J µg/kg.

TPH, the sum of gasoline-, diesel-, and residual (oil)-range hydrocarbons, was detected in 213 samples (98.6%) of the 216 samples for which these compounds were analyzed (Map 4-28a – i). Detected TPH concentrations in samples ranged from 10 J to 58,600 J mg/kg (at G298), with a mean value of 1,780 mg/kg and a median value of 580 J mg/kg. Of the individual components, diesel-range hydrocarbons were the most frequently detected (210 samples), and displayed the highest maximum concentration. Detected diesel concentrations ranged from 10 J to 39,000 J mg/kg, with mean value of 763 mg/kg and a median value of 120 J mg/kg. Detected concentrations of residual-range hydrocarbons (203 samples), ranged from 14.5 J to 18,000 J mg/kg, with a mean value of 1,060 mg/kg and a median value of 470 J mg/kg. Detected concentrations of gasoline-range hydrocarbons (in 27 samples) ranged from 1.9 to 1,600 J mg/kg, with a mean value of 100 mg/kg and a median value of 12 J mg/kg. The maximum concentrations of diesel-, gasoline-, and residual-range hydrocarbons all occurred in sample G298.

Seventy-six surface interval samples were analyzed for dioxin and furan compounds. FODs for these compounds ranged from 17.1% (13 samples) for 2,3,7,8-TCDD to 100% for heptachlorodibenzo-p-dioxin homologs. Calculated total 2,3,7,8-TCDD TEQ values (Map 4-29a – i) of the analyzed dioxins/furans and dioxin/furan homologs ranged from 0.00684 J to 322 J pg/g (max at G351-2), with a mean value of 12.6 pg/g and a median value of 0.831 J pg/g.

4.3 SUBSURFACE RIVERBED SEDIMENT RESULTS

This section describes the physical characteristics and chemical concentrations measured in the 609 subsurface sediment samples submitted to the laboratories for analysis. It includes an overview of the detected results from all subsurface samples and a general discussion of chemical trends in the subsurface intervals. The summary statistics for all analytes measured in subsurface sediment samples are shown in Table 4-3. Figures 4-1 through 4-29 include frequency distributions of both detected and undetected values of all subsurface data for each mapped analyte.

4.3.1 Subsurface Results Summary

The fines content (Map 4-1a – i) in the subsurface samples ranged between 0.29 and 100% (max at C380-B), with a mean value of 50.2% and a median value of 56.8%. TOC content (Map 4-2a – i) ranged from 0.03 to 35.5% (max at C302-C), with a mean value of 2.02% and a median value of 1.88%.

Aluminum, arsenic, chromium, copper, lead, nickel, and zinc were detected in each of the subsurface samples analyzed for metals. Detected arsenic concentrations ranged from 0.8 to 44.5 J mg/kg (max at C384-B; Map 4-3a – i), with a mean value of 4.36 mg/kg and a median value of 3.79 mg/kg. Detected concentrations of cadmium ranged from 0.034 J to 7.03 mg/kg (max at C324-E; Map 4-4a – i), with a mean value of 0.339 mg/kg and a median value of 0.28 J mg/kg. Total chromium detected concentrations ranged from 9.29 to 249 mg/kg (max at 207-B; Map 4-5a – i), with a mean value of 31.5 mg/kg and a median value of 30.2 mg/kg. Detected copper concentrations ranged from 10.4 to 3,290 mg/kg (max at C384-B; Map 4-6a – i), with a mean value of 52.7 mg/kg and a median value of 36.9 mg/kg. Detected lead concentrations ranged from 2.06 to 3,330 J mg/kg (max at C326-C; Map 4-7a – i), with a mean value of 38.5 mg/kg and a median value of 21.5 mg/kg. Detected concentrations of mercury ranged from 0.007 J to 4.14 mg/kg (max at C295-C; Map 4-8a – i), with a mean value of 0.191 mg/kg and a median value of 0.101 mg/kg. Detected concentrations of zinc ranged from 34.2 to 1,930 mg/kg (max at C384-B; Map 4-9a – i), with a mean value of 144 mg/kg and a median value of 117 mg/kg.

Butyltins were analyzed in 171 samples, and detected in at least 42 samples. Dibutyltin (127 samples) and monobutyltin (112 samples) were the most frequently detected, though tributyltin displayed the highest maximum, mean and median concentrations. Detected dibutyltin concentrations ranged from 0.087 J to 6,000 J µg/kg (max at C392-B) with a mean value of 83 µg/kg and a median value of 1.9 µg/kg; monobutyltin detections ranged from 0.12 J to 540 J µg/kg (max in C392-B), with a mean value of 10.3 µg/kg and a median value of 0.71 J µg/kg; and tributyltin (Map 4-10a – i) detections ranged from 0.32 J to 36,000 J µg/kg (max at C384-B), with a mean value of 752 µg/kg and a median value of 12.2 µg/kg.

Five PCB Aroclors (1242, 1248, 1254, 1260, and 1268) were detected in subsurface samples. Aroclors 1260 and 1254 were the most frequently detected (275 samples and 257 samples, respectively), but Aroclor 1242 was detected at the highest maximum concentration. Detected concentrations of Aroclor 1242 ranged from 13.7 J µg/kg to 16,400 µg/kg (max at C455-B) with a mean value of 2,430 µg/kg and a median value of 210 J µg/kg. Detected concentrations of Aroclor 1260 (Map 4-14a – i) ranged from 1.78 J to 3,200 J µg/kg (max at C025-C1), with a mean value of 107 µg/kg and a median value of 37.6 µg/kg. Detected concentrations of Aroclor 1254 (Map 4-13a – i) ranged from 0.906 to 5,520 J µg/kg (max at C455-B), with a mean value of 157 µg/kg and a median value of 59.5 J µg/kg. Detected concentrations of Aroclor 1248 (Map 4-12a – i) ranged from 1.73 J to 1,850 J µg/kg (max in C455-B), with a mean value of 97.9 µg/kg and a median value of 34 µg/kg. Total detected PCB Aroclor concentrations (Map 4-11a – i) in subsurface samples ranged from 0.906 to 21,900 J µg/kg (max at C455-B), with an overall mean value of 390 µg/kg and a median value of 116 J µg/kg.

Organochlorine pesticide compounds were analyzed in 444 subsurface interval samples. All 28 compounds except toxaphene were detected in one or more samples. The pesticides 4,4'-DDD (357 samples; Map 4-16a – i), 4,4'-DDE (329 samples; Map 4-17a – i), and 4,4'-DDT (324 samples; Map 4-18a – i) were the most frequently detected (74.1% to 80.4% FOD), although some 4,4'-DDD detections were tentatively identified. Total 4,4'-DDT (sum of 4,4'-DDT, -DDD and –DDE; Map 4-15a – i) concentrations were detected in 379 subsurface samples ranging in concentration from 0.08 J to 72,700 J µg/kg (max at C348-C), with an overall mean value of 519 µg/kg and a median value of 12.2 J µg/kg. Total chlordane compounds were detected in 279 samples. Derived detected concentrations of total chlordanes (Map 4-19a – i) ranged from 0.038 J to 2,330 J µg/kg (max at C455-B), with a mean value of 24.3 µg/kg and a median value of 2.22 J µg/kg.

Herbicides were analyzed in 140 subsurface samples. Only five of the ten herbicide compounds analyzed were detected: Silvex (in one sample), 2,4-DB (in one sample), MCPP (in two samples), MCPA (in three samples), and 2,4-D (in five samples). Detected concentrations of 2,4-D ranged from 7.14 to 473 µg/kg (max at C335-B), with a mean value of 128 µg/kg and a median value of 45.5 J µg/kg. The one occurrence of 2,4-DB was the highest concentration of detected herbicides, at 797 µg/kg (max at C335-B).

VOCs were analyzed in 270 subsurface interval samples. Twenty-nine of the 49 compounds analyzed were detected. Methyl ethyl ketone was detected most frequently (in 163 samples), at concentrations ranging from 1.5 J to 31 J µg/kg (max at C359-D), with a mean value of 4.87 µg/kg, and a median value of 3.8 J µg/kg. The VOC detected at the highest concentration was trichloroethene (TCE). TCE concentrations, detected in 103 samples, ranged from 0.11 J to 1,900,000 µg/kg (max at C299-B), with a mean value of 21,400 µg/kg and a median value of 0.51 J µg/kg. Concentrations of total xylenes (the sum of o- and m,p-xylenes), a mapped chemical detected in 80 samples (Map 4-21a – i), ranged from 0.11 J to 280,000 µg/kg (max at C301-E) with a mean value of 9,960 µg/kg and a median value of 3.53 J µg/kg. Benzene (Map 4-20 a – i) was detected in 23 samples, at concentrations ranging from 0.045 J to 270,000 µg/kg (max at C301-E), with a mean value of 6,580 µg/kg and a median value of 0.25 J µg/kg.

SVOCs were analyzed in 511 subsurface samples. PAH compounds, detected in 70.5% to 98.6% (from 391 to 504 samples) of samples analyzed, were present at the highest maximum and mean detected concentrations. Total PAH concentrations in samples ranged from 0.54 J to 53,300,000 µg/kg (max at C302-C), with a mean value of 422,000 µg/kg and a median value of 1,780 µg/kg. Detected concentrations of LPAH compounds (detected in 504 samples; Map 4-26a – i) ranged from 0.45 J to 39,900,000 µg/kg (max at C302-C), with an overall mean value of 291,000 µg/kg and a median value of 407 µg/kg. Detected concentrations of HPAH compounds (detected in 498 samples; Map 4-27a – i) ranged from 0.48 J to 13,400,000 µg/kg (max at C302-C), with an overall mean value of 133,000 µg/kg and a median value of 1,290 µg/kg. Concentrations of mapped chemicals dibenzofuran, hexachlorobenzene, bis(2-ethylhexyl)phthalate, and 4-methylphenol were detected in 26.6% (hexachlorobenzene) to 90.4% (dibenzofuran) of samples analyzed. Detected concentrations of dibenzofuran (Map 4-22a – i) ranged from 0.22 J to 230,000 µg/kg (max at C302-C), with a mean value of 2,210 ug/kg and a median value of 12 µg/kg. Detected concentrations of hexachlorobenzene (Map 4-23a – i) ranged from 0.066 J to 134 J ug/kg (max at C366-C1), with a mean value of 5.65 ug/kg and a median value of 1.29 J µg/kg. Bis(2-ethylhexyl)phthalate detected concentrations (Map 4-25a – i) ranged from 4.9 J to 10,000 µg/kg (max at C240-B), with an overall mean value of 493 µg/kg and a median value of 93 µg/kg. Detected concentrations of 4-methylphenol (Map 4-24a – i) ranged from 3.6 J to 800 ug/kg (max at C263-B), with a mean value of 65.4 ug/kg and a median value of 34 J µg/kg.

Gasoline-range hydrocarbons, due to the short-holding time for this analysis, were analyzed in 429 subsurface interval samples, while diesel- and residual-range hydrocarbons were analyzed in 348 samples. Overall, detected TPH concentrations (Map 4-28a – i) in samples ranged from 9.25 J to 321,000 J mg/kg (max at C301-C), with a mean value of 5,050 mg/kg and a median value of 1,090 J mg/kg. Of the individual components, diesel-range hydrocarbons were the most frequently detected (302 samples), and displayed the highest maximum detected concentration. Detected diesel concentrations ranged from 9.9 J to 190,000 J mg/kg, with a mean value of 2,850 mg/kg and a median value of 360 J mg/kg. Detected concentrations of residual-range hydrocarbons (detected at 301 samples), ranged from 9.25 J to 110,000 J mg/kg, with a mean value of 2,170 mg/kg and a median value of 750 J mg/kg. Gasoline-range hydrocarbons were detected in 139 samples analyzed, at concentrations ranging from 1.5 to 21,000 J mg/kg, with a mean value of 582 mg/kg and a median value of 32 J mg/kg. The maximum concentrations of all TPH results occurred in sample C301-C.

One hundred nineteen subsurface samples were analyzed for dioxin and furan compounds. Detected total 2,3,7,8-TCDD TEQ values (Map 4-29a – i) of the analyzed dioxins/furans and dioxin/furan homologs ranged from 0.00053 J to 200 pg/g (max at C334-B), with a mean value of 8.46 pg/g and a median value of 1.11 J pg/g.

4.3.2 Subsurface Results by Depth

This section presents the analytical results of the subsurface sediment samples by depth, including a summary of sample intervals and a discussion of the results for the mapped indicator chemicals.

4.3.2.1 Subsurface Sample Intervals

The range of starting depths, thicknesses, and maximum end depths for the subsurface intervals are summarized in the following table.

Interval ID	Maximum Number of Analyzed Samples	Minimum Starting Depth (cm bml)	Maximum Starting Depth (cm bml)	Minimum Thickness (cm)	Maximum Thickness (cm)	Maximum End Depth (cm bml)
B	206	23	32	30	160	198
C	198	60	198	24	155	306
D	122	98	298	24	155	425
E	55	188	440	7	140	533
F	20	223	518	23	137	573
G	7	332	490	35	144	574
H	1	360			88	448

For this discussion, the subsurface samples were grouped according to their end depths into one of three categories:

- 23-199 cm (0-6.5 ft) below mudline (bml)
- 200-399 cm (6.6-13 ft) bml
- 400-574 cm (13.1-18.8 ft) bml.

Listings of the individual core segments included in each of these categories are presented in Table 4-13.

4.3.2.2 Summary of Indicator Chemical Results by Depth Group

Summary statistics for the analytical results based on these three depth categories defined above are presented in Table 4-14. These results are summarized in the following sections. For simplicity, the depth groupings are referred to as the upper (23-199 cm), middle (200-399 cm), and lower (400-574 cm) subsurface samples. The frequency distributions of the detected concentrations by depth group for the mapped indicator chemicals are presented in Figures 4-30 through 4-56.

Metals

The highest maximum concentrations of arsenic, chromium, copper, lead, and zinc decrease with depth from the upper subsurface to the lower subsurface. Mean and median values for the indicator metals showed ranges within 30 and 34 mg/kg or less, respectively, between the three depth groups. The results for each of the indicator metals are presented below.

Arsenic was detected in all subsurface samples analyzed. The maximum detected concentrations per depth interval decreased with depth, ranging from 8.37 mg/kg in the lower subsurface samples to 44.5 J mg/kg within the upper subsurface samples. Mean detected values ranged within 1 mg/kg, from 3.9 mg/kg in the middle subsurface samples to 4.8 in the upper subsurface samples. Median detected values showed a range of less than 1 mg/kg, from 3.48 mg/kg in the middle subsurface samples to 4.22 J mg/kg in the lower subsurface samples. The histogram of arsenic data is presented in Figure 4-30.

The FOD for cadmium ranged from 98% in the upper subsurface samples to 100% in the lower subsurface samples. The maximum detected concentrations per depth interval ranged from 0.779 mg/kg in the lower subsurface samples to 7.03 mg/kg in the middle subsurface samples. Mean detected values ranged within approximately 0.1 mg/kg, from 0.3 mg/kg in the middle depth to 0.4 mg/kg in the lower 2 m. Median detected values showed a range of less than 0.2 mg/kg, from 0.218 mg/kg in the middle subsurface samples to 0.394 J mg/kg in the lower subsurface samples. The histogram of cadmium data is presented in Figure 4-31.

Total chromium was detected in all subsurface samples analyzed. The maximum detected concentrations per depth interval decreased with depth, ranging from 43.2 mg/kg in the lower subsurface samples to 249 mg/kg in the upper subsurface samples. The mean detected total chromium concentrations decreased with depth, ranging from 33 mg/kg in the upper depth to 29 mg/kg in the lower subsurface samples. Median detected values ranged from 28.2 mg/kg in the middle subsurface samples to 32.2 mg/kg in the upper subsurface samples. The histogram of total chromium data is presented in Figure 4-32.

Copper was detected in all subsurface samples analyzed. The maximum and mean detected copper concentrations per depth interval decreased with depth. Maximum concentrations ranged from 107 mg/kg in the lower subsurface samples to 3,290 mg/kg in the upper subsurface samples. Mean detected values ranged from 39 mg/kg in the lower subsurface samples to 64 mg/kg in the upper subsurface samples. Median detected values ranged from 30.5 mg/kg in the middle subsurface to 40.2 mg/kg in the upper subsurface samples. The histogram of copper data is presented in Figure 4-33.

Lead was detected in all subsurface samples analyzed. The maximum and mean detected lead concentrations per depth interval decreased with depth. Maximum concentrations ranged from 85.2 J mg/kg in the lower subsurface samples to 3,330 J mg/kg in the upper subsurface samples. Mean detected values ranged from 28 mg/kg in the lower subsurface samples to 48 mg/kg in the upper subsurface samples. Median detected values ranged from 17.9 mg/kg in the middle subsurface samples to 24.9 mg/kg in the upper subsurface samples. The histogram of lead data is presented in Figure 4-34.

The FOD for mercury ranged from 89.5% in the lower subsurface samples to 99.2% in the upper subsurface samples. Maximum detected concentrations ranged from 0.626 J mg/kg in the lower subsurface samples to 4.14 mg/kg in the middle subsurface samples. Mean detected values showed a range of only 0.8 mg/kg among the three depth groups, from 0.18 mg/kg in the upper subsurface samples to 0.26 mg/kg in the lower subsurface samples. Median detected concentrations showed a range of approximately 0.12 mg/kg between the three groups, from 0.092 mg/kg in the middle subsurface samples to 0.212 mg/kg in the lower subsurface samples. The histogram of mercury data is presented in Figure 4-35.

Zinc was detected in all subsurface samples analyzed. The maximum detected concentrations decreased with depth, ranging from 263 mg/kg in the lower subsurface samples to 1,930 mg/kg in the upper subsurface samples. Mean detected concentrations in both the middle and lower subsurface samples were 130 mg/kg, a decrease from 160 mg/kg in the upper subsurface samples. Median detected concentrations showed a range of 35.2 mg/kg between the three groups, from 95.8 mg/kg in the middle subsurface samples to 131 mg/kg in the upper subsurface samples. The histogram of zinc data is presented in Figure 4-36.

TBT

TBT was detected in 76.1% of the upper subsurface samples and 46.2% of the middle subsurface samples, but was not detected in any of the lower subsurface samples analyzed. Maximum, mean, and median detected concentrations were all highest in the upper subsurface samples. Maximum detected concentrations were 36,000 J µg/kg in the upper subsurface samples and 910 µg/kg in the middle subsurface samples. Mean detected concentrations showed a range of 1,038 µg/kg among the two depth groups, from 1,100 µg/kg in the upper subsurface samples to 62 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 13.7 µg/kg, from 16 µg/kg in the upper subsurface samples to 2.3 µg/kg in the middle subsurface samples. The histogram of TBT data is presented in Figure 4-37.

PCBs

The FOD of summed detected concentrations of total PCBs as Aroclors ranged from 51.4% in the middle subsurface samples to 73.5% in the upper subsurface samples. Maximum concentrations decreased with depth from 832 J µg/kg in the lower subsurface samples to 21,900 J µg/kg in the upper subsurface samples. Mean detected concentrations showed a range of 360 µg/kg among the three depth groups, from 180 µg/kg in the middle subsurface samples to 540 µg/kg in the upper subsurface samples. Median detected concentrations showed a range of 12 µg/kg, from 109 J µg/kg in the middle subsurface samples to 121 J µg/kg in the upper subsurface samples. The histogram of total PCB data is presented in Figure 4-38.

Similarly, the maximum concentrations of the individual indicator PCB Aroclors 1248, 1254, and 1260 all occurred within the upper subsurface samples and decreased with depth in the subsequent depth groups. The histograms of Aroclor 1248, 1254, and 1260 data are presented in Figures 4-39, 4-40, and 4-41, respectively.

Pesticides

The FOD of total DDT constituents ranged from 73.7% in the lower subsurface samples to 92.2% in the upper subsurface samples. The highest maximum total DDT detected and mean concentrations among the three depth groups occurred in the middle subsurface samples. Maximum detected concentrations ranged from 182 J µg/kg in the lower subsurface samples to 72,700 J µg/kg in the middle subsurface samples. Mean detected concentrations showed a range of 956 µg/kg, from 44 µg/kg in the lower subsurface samples to 1,000 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 21.4 µg/kg, from 11.7 J µg/kg in the upper subsurface samples to 33.1 J µg/kg in the lower subsurface samples. The histogram of total DDT data is presented in Figure 4-42.

The FOD of 4,4'-DDD ranged from 72.1% in the middle subsurface samples to 88.9% in the upper subsurface samples. Both the maximum and mean detected concentrations were highest in the middle subsurface samples. Maximum concentrations ranged from 51,800 J µg/kg (tentatively identified) in the middle subsurface samples to 165 µg/kg (tentatively identified) in the lower subsurface samples. Mean concentrations showed a range of 652 µg/kg among the three depth groups, ranging from 28 µg/kg in the lower subsurface samples to 680 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 5.16 µg/kg, increasing with depth from 6.74 J µg/kg (tentatively identified) in the upper subsurface samples to 11.9 J µg/kg in the lower subsurface samples. The histogram of 4,4'-DDD data is presented in Figure 4-43.

The FOD of 4,4'-DDE ranged from 57.9% in the lower subsurface samples to 84.8% in the upper subsurface samples. The maximum detected concentrations decreased with depth, ranging from 22 J µg/kg (tentatively identified) in the lower subsurface samples to 2,690 J µg/kg in the upper subsurface samples. Mean concentrations showed a range of 19.4 µg/kg among the three depth groups, from 9.6 µg/kg in the lower subsurface samples to 29 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 5.84 µg/kg, increasing with depth from 4.05 J µg/kg (tentatively identified) in the upper subsurface samples to 9.89 J µg/kg in the lower subsurface samples. The histogram of 4,4'-DDE data is presented in Figure 4-44.

The FOD of 4,4'-DDT ranged from 64.7% in the lower subsurface samples to 83.3% in the upper subsurface samples. The maximum detected concentrations ranged from 61.5 J µg/kg in the lower subsurface samples to 22,000 J µg/kg in the middle subsurface samples. Mean concentrations showed a range of 429 µg/kg among the three depth groups, from 11 µg/kg in the lower subsurface samples to 440 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 1.34 µg/kg, increasing with depth from 1.56 J µg/kg (tentatively identified) in the upper subsurface samples to 2.9 J µg/kg in the lower subsurface samples. The histogram of 4,4'-DDT data is presented in Figure 4-45.

The FOD of the total chlordane constituents ranged from 47.4% in the lower subsurface samples to 70.5% in the upper subsurface samples. The maximum total chlordanes detected concentrations decreased with depth, ranging from 12.7 J µg/kg in the lower subsurface samples to 2,330 J µg/kg in the upper subsurface samples. Mean concentrations showed a range of 21.8 µg/kg among the three depth groups, from 4.2 µg/kg in the lower subsurface samples to 26 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 1.37 µg/kg, increasing with depth from 2.15 J µg/kg in the upper subsurface samples to 3.52 J µg/kg in the lower subsurface samples. The histogram of total chlordane data is presented in Figure 4-46.

VOCs
The FOD of benzene ranged from 38.9% in the upper subsurface samples to 60% in the lower subsurface samples. The maximum detected concentrations ranged from 28,000 µg/kg in the lower subsurface samples to 270,000 µg/kg in the middle subsurface samples. Mean detected values showed a range of 7,100 µg/kg among the three depth groups, from 2,300 µg/kg in the lower subsurface samples to 9,400 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 0.12 µg/kg among the three subsurface groups, from 0.19 J µg/kg in the middle subsurface samples to 0.31 J µg/kg in the upper subsurface samples. The histogram of benzene data is presented in Figure 4-47.

The FOD of total xylenes ranged from 15% in the lower subsurface samples to 32.4% in the upper subsurface samples. The maximum detected concentrations ranged from 27,400 µg/kg in the lower subsurface samples to 280,000 µg/kg in the middle subsurface samples. Mean detected values showed a range of 12,700 µg/kg among the three depth groups, from 3,300 µg/kg in the upper subsurface samples to 16,000 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 16.92 µg/kg among the three subsurface groups, from 1.88 J µg/kg in the middle subsurface samples to 18.8 µg/kg in the upper subsurface samples. The histogram of total xylenes data is presented in Figure 4-48.

SVOCs
The FOD of total LPAHs ranged from 97.9% in the middle subsurface samples to 100% in the lower subsurface samples. The maximum detected concentrations ranged from 1,750,000 µg/kg in the lower subsurface samples to 39,900,000 µg/kg in the middle subsurface samples. Mean detected values showed a range of 380,000 µg/kg among the three depth groups, from 100,000 µg/kg in the lower subsurface samples to 480,000 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 1,230 µg/kg among the three depth groups, from 360 µg/kg in the upper subsurface samples to 1,590 µg/kg in the lower subsurface samples. The histogram of LPAH data is presented in Figure 4-49.

The FOD of total HPAHs ranged from 94.7% in the lower subsurface samples to 99.2% in the upper subsurface samples. The maximum detected concentrations ranged from 932,000 J µg/kg in the lower subsurface samples to 13,400,000 µg/kg in the middle subsurface samples. Mean detected values showed a range of 114,000 µg/kg among the three depth groups, from 76,000 µg/kg in the lower subsurface samples to 190,000 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 2,590 µg/kg among the three depth groups, from 1,180 µg/kg in the upper subsurface samples to 3,770 µg/kg in the lower subsurface samples. The histogram of HPAH data is presented in Figure 4-50.

The FOD of dibenzofuran ranged from 84.2% in the lower subsurface samples to 95.7% in the upper subsurface samples. The maximum detected concentrations ranged from 6,300 J µg/kg in the lower subsurface samples to 230,000 µg/kg in the middle subsurface samples. Mean detected values showed a range of 2,950 µg/kg among the three depth groups, from 550 µg/kg in the lower subsurface samples to 3,500 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 9.2 µg/kg among the three depth groups, from 9.8 J µg/kg in the upper subsurface samples to 19 µg/kg in the lower subsurface samples. The histogram of dibenzofuran data is presented in Figure 4-51.

The FOD of hexachlorobenzene ranged from 10.5% in the lower subsurface samples to 28.2% in the upper subsurface samples. The maximum detected concentrations ranged from 0.423 J µg/kg in the lower subsurface samples to 134 J µg/kg in the middle subsurface samples. Mean detected values showed a range of 7.16 µg/kg among the three depth groups, from 0.24 µg/kg in the lower subsurface samples to 7.4 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 1.26 µg/kg among the three depth groups, from 0.066 J µg/kg in the lower subsurface samples to 1.33 J µg/kg in the middle subsurface samples. The histogram of hexachlorobenzene data is presented in Figure 4-52.

The FOD of 4-methylphenol ranged from 47.3% in the middle subsurface samples to 59.6% in the upper subsurface samples. Maximum detected concentrations decreased with depth, ranging from 300 µg/kg in the lower subsurface samples to 800 µg/kg in the upper subsurface samples. Mean and median detected concentrations of 4-methylphenol increased with depth. Mean concentrations of 4-methylphenol showed a range of 68 µg/kg, from 52 µg/kg in the upper subsurface samples to 120 µg/kg in the lower subsurface samples. Median detected concentrations showed a range of 81 µg/kg, from 29 µg/kg in the upper subsurface samples to 110 µg/kg in the lower subsurface samples. The histogram of 4-methylphenol data is presented in Figure 4-53.

The FOD of bis(2-ethylhexyl)phthalate decreased with depth, ranging from 5.3% (1 sample) in the lower subsurface samples to 36.5% in the upper subsurface samples. Maximum and mean detected concentrations also decreased with depth. Maximum detected concentrations ranged from 94 µg/kg in the one lower subsurface sample to 10,000 µg/kg in the upper subsurface samples. Mean detected concentrations showed a range of 576 µg/kg among the three depth groups, from 94 µg/kg in the one lower subsurface sample to 670 µg/kg in the upper subsurface samples. Median detected concentrations showed a range of 20 µg/kg, from 80 µg/kg in the middle subsurface samples to 100 µg/kg in the upper subsurface samples. The histogram of bis(2-ethylhexyl)phthalate data is presented in Figure 4-54.

TPH

The FOD for TPH compounds ranged from 87.5% in the lower subsurface samples to 93.6% in the upper subsurface samples. Maximum and mean detected concentrations occurred in the middle subsurface samples. Maximum detected concentrations ranged from 7,720 J µg/kg in the lower subsurface samples to 321,000 J µg/kg in the middle subsurface samples. Mean detected concentrations showed a range of 4,700 µg/kg among the three depth groups, from 2,500 µg/kg in the lower subsurface samples to 7,200 µg/kg in the middle subsurface samples. Median detected concentrations showed a range of 550 µg/kg, from 990 J µg/kg in the upper subsurface samples to 1,540 J µg/kg in the lower subsurface samples. The histogram of TPH data is presented in Figure 4-55.

2,3,7,8-TCDD TEQ Values
The FOD for 2,3,7,8-TCDD TEQs ranged from 83.6% in the middle subsurface samples to 100% (based on only 3 samples analyzed) in the lower subsurface samples. Maximum detected concentrations decreased with depth, ranging from 13.7 J pg/g in the lower subsurface samples to 200 pg/g in the upper subsurface samples. Mean detected concentrations showed a range of 4.4 pg/g among the three depth groups, from 6.6 pg/g in the lower subsurface samples to 11 pg/g in the middle subsurface samples. Median detected concentrations showed a range of 4.87 pg/g, from 0.284 J pg/g in the middle subsurface samples to 5.15 J pg/g in the lower subsurface samples. The histogram of 2,3,7,8-TCDD TEQ data is presented in Figure 4-56.

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